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CONSOLIDATED WITH . The Executive PURCHASER

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URCHASING

page 15

MAY 1936





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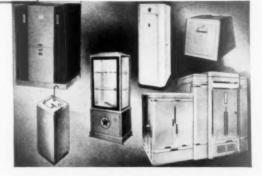


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Better Business

To the Editor:

Without using a lot of statistics, a good picture of business conditions today may be obtained by making a few comparisons. The following information was gathered from the Federal Reserve Districts throughout the country.

The 1935 Industrial commodity prices averaged slightly under the average for 1934 due mostly to adjustments following the demise of NRA. Taking 2,010 classes of industry as a whole, the net earnings in 1934 amounted to \$1,789,141,000. These same industry classes had net earnings of \$2,541,138,000 in 1935 or 42% improvement. As a return on capital invested, 1934 showed 3.5% and 1935 showed 5.1%.

The particular significance of these figures showing a healthy improvement is that the betterment was secured without higher industrial commodity prices and with a better wage rate. Hence it is obvious that the increased volume of business plus more efficient production methods and costs shows the improvement to have been made on a very sound foundation.

The volume of business in the United States during the first quarter of 1936 was a little below the third and fourth quarters of 1935 but substantially better than the corresponding quarter a year ago. The recession in business volume, however, has been due very largely to the severity of the winter weather in practically all regions of the country. Late in the quarter and at the start of the present quarter a partial paralysis of business over a wide area, due to floods and wind storms, has tended to keep the business volume down.

These conditions, over which business and industry had no control, have served to hold up activity. As better weather comes, all the held-up projects are being released. As far as the flood and wind storm damages are concerned, there has been about 21% of absolute destruction of essentials which must be replaced as soon as possible. The probable business level for the current second quarter should be measurably higher than the first. The usual seasonal recession for the summer months expected under normal conditions will probably not appear this year and the general advance should continue all through to the end of the last quarter.

The business trend line (which corresponds to Babson's X-Y line) for any number of years one cares to use is always a gradually rising oblique line. If we

draw a straight horizontal line from the point representing the business activity or volume of business in the United States at the end of the first quarter of 1936, we find that it will intersect the normal trend line located at the end of 1929 and the beginning of 1930. Hence, we are actually at a normal business volume for those two years now and practically out of the depression, even if a lot of individuals are not or think they are not.

The effect of the political situation on business this year has been thoroughly discounted. Business and industry are busy attending to their knitting. Business and politics never have mixed to produce a profitable and nourishing drink and probably never will. All indications point to 1936 as reaching the normal spot on the trend line or very close to it. It may even go a little above it.

C. G. Bunnell Purchasing Agent Westinghouse Elec. & Mfg. Co. East Pittsburgh, Penna. April 28, 1936

Heartening to all business men is this incisive analysis of the progress of business recovery to date; a timely and helpful comment to those purchasers who must look to covering their requirements over the coming period; food for thought to legislators and administrators who exercise some measure of control over the conditions under which business must be done, and who may not have faced squarely the pertinent question of whether business improvement has been because of or in spite of these controls

Unappreciated Buyers

To the Editor:

I might be criticized for going back on my present profession e.s a salesman, but I can't see how a salesman gets so much acclaim and privilege in a company and the P.A. of the same company gets the opposite.

If a salesman makes a mistake or a slip he can come back and either admit it or else withdraw his proposition; but if a P.A. makes a slip or a mistake, he has to get out of it the best he can with no sympathy from anyone. If a salesman loses an order he will make up the average some other place; but if a P.A. picks the wrong source of supply and some trouble develops, then he should have known better in the first place.

There are so many weeks on our calendar devoted to appreciation for everything conceivable—we have just lived through a week of appreciation for dumb animals—that it will be necessary to put on a month of appreciation for purchasing agents in

order to catch up with what has already happened.

The more I am inducted into the "Art of Selling," the more I appreciate the responsibilities of a P.A.

BILL CAMPBELL
Wolverine Tube Co.

Dayton, Ohio April 28, 1936

As a top notch performer in both purchasing and sales, Mr. Campbell, late of Frigidaire and now of Wolverine, is in an excellent position to make authentic comparisons which might prove odious coming from a more biased source.

terested to have pointed out reasons why every town, city, county and state government should not delegate the responsibility of getting the most value from every tax dollar to authority qualified to accomplish this result.

H. G. SAUMSIEGLE
Purchasing Agent
City of Waltham

Waltham, Mass. April 7, 1936

Not merely opinion, but the fruit of many years of successful experience in public buying, is this suggestion. Of current interest are the aggressive campaigns for better municipal purchasing, through centralization, conducted by the P.A. associations of Connecticut and Western Massachusetts, forcibly brought to the attention of mayors and other civic executives by their attendance at special association meetings devoted to the topic, and, in the latter case, taken up by the local press to the extent of feature pages in the magazine section of the Sunday editions, citing the accomplishments of the plan in other progressive cities. Of interest, too, is the action of the Civil Service Commission in Seattle, charged with the selection of a man for the newly created post of City P.A., in asking a representative committee of business men to assist in devising and conducting the examination of appli-

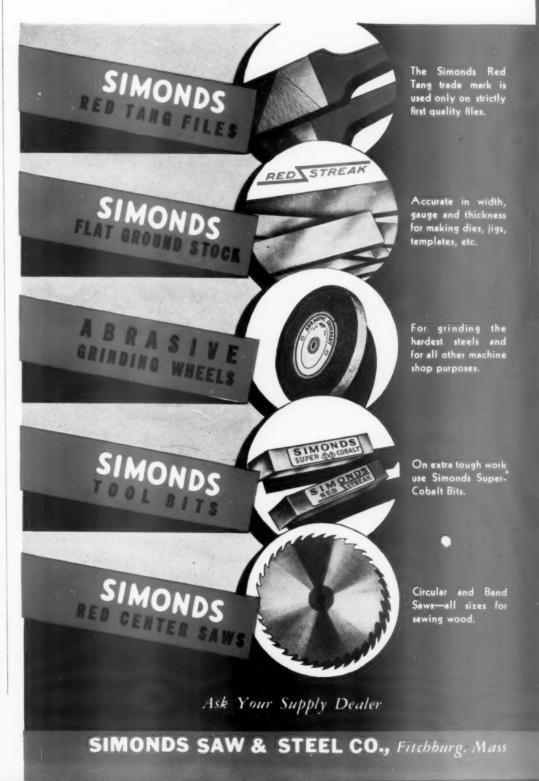
Public Purchasing

To the Editor:

Why is it that during these times when the tax paying public is so definitely tax minded and vitally interested in the reduction of governmental expenditures, one of the greatest opportunities to realize the most value from every tax dollar spent is not taken advantage of-namely, centralization of buying? Much has been said about local governments regarding high taxes; taxpayers associations have been formed to study conditions; but in very few instances have any changes been made in methods of procurement by communities interested in lower taxes. Is it because the average citizen does not associate business principles with the function of government? Do industrial purchasing agents make any effort to have the buying centralized in their communities? Many of them are tax payers and should be interested at least to the extent of the wear and tear on their pocketbooks, and because of their knowledge of the importance of the function of purchasing.

Is it because those in charge of buying for individual departments in various governmental units are jealous of their prerogative and are vigorously opposed to the loss of this power? Is it because influential politicians are opposed to this phase of efficiency in government because of the tendency to remove favoritism in public buying? Is it because executive heads of communities do not realize the advantages of centralized purchasing or are deliberately not interested in this method of reducing taxes? Business recognizes purchasing as a vital function and necessary to produce profit. Why should not purchasing occupy the same position in conducting government?

My mind is positive regarding the need for specialists in the responsibility of buying for government. The questions raised are, in my opinion, some reasons for the non-adoption of this plan, and it is my further opinion that interest has not been focused for the public because of lack of the right kind of propaganda. I may be entirely wrong and if so, would be in-



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RYERSON STEEL-SERVICE

Who Sets the Pace?

NE of the basic issues involved in virtually every piece of business regulatory legislation—and several highly important measures of this sort are now pending—is the question of who shall be accepted as the pace-maker. It is plain to the most elementary reasoning that leadership must be conceded to the progressive and efficient units of industry and distribution if we are to progress and develop an efficient industrial and trade structure to serve the nation. But so much of our recent thinking has been along the lines of protecting the marginal producer and operator that we are now in a fair way to degenerate into a community of umbrella holders and hand the baton of leadership to those who are equipped with neither the ability nor the disposition to wield it.

Equality of opportunity has become a fetish of words distorted far from their true meaning. In the lexicon of regulation, it is synonymous with equality of price. And that can mean only one thing—leveling to the standard of the high cost unit, letting the laggard set the pace.

As an instance of the ultimate in equality of opportunity, we may cite an item in the Lawrence (Mass.) *Tribune* of April 25, recording the purchase of a carload of cement for public use. Seven identical bids were received: \$2.44 per barrel, less ten cents ten days. Whereupon Purchasing Agent McKenna "held a drawing and the contract was won by the B. L. McDonald Company."

Experienced buyers always question the price that is substantially "out of line." They also know that on any rational basis, with all the variables of manufacturing cost, transportation, distribution efficiency, and conditions of sale, it would be an impossible coincidence for all vendors to arrive at an identical figure. Yet that, in plain words, is the objective sought in such plans as the basing point system, which eliminates the transportation variable, or the Patman anti-price-discrimination bill, which eliminates the variables of distribution cost and customer desirability—always, necessarily, by ruling out the advantages accruing through strategic location, economical operation, or favorable conditions of purchase and sale.

"Under our present system," declares Representative Patman, "the efficient merchant cannot survive." That is a statement requiring a lot of explanation, which the Congressman unfortunately does not provide. What are the efficient merchant's chances of getting the order in a case such as that recorded above? Exactly one in seven. And the chances of the least efficient merchant in that group? Exactly the same.

For any sound and significant recovery we must restore business leadership to those who have earned it by their resourcefulness, initiative, energy, imagination, foresight, ability. That can be done only through competition.

Real industrial leadership welcomes the competitive test as the measure of merit and the means of progress and growth. Real purchasing demands that competition be maintained. To this end the buyer will continue to make his business as attractive as possible to the vendor, with the reasonable expectation of sharing such advantages as may develop. He will seek some correlation between price, value, quantity, and services required and rendered. Industry and the nation will be better served if he can negotiate, not downward from an artificial market parity, but fairly upward from actual, legitimate, competitive costs.

STUART F. HEINRITZ, EDITOR

INDUSTRY'S UGLY DUCKLING

- - the Purchasing Department

There is so much profit latent in proper buying that management can ill afford to deprecate the purchase function or to view it with condescension

OUITE a number of years ago, a purchasing agent was defined by one remembered by my generation as a prolific writer with whom you did not always agree but frequently admired. Elbert Hubbard "The typical purchasing wrote: agent is a man past middle life, spare, wrinkled, intelligent, cold, passive, noncommittal, with eyes like a codfish, polite in contact, but at the same time irresponsive, cool, calm and damnably composed as a concrete post or a plaster-of-Paris cat; a human petrification with a heart of feldspar and without charm or friendly germ, minus bowels, passions or a sense of humor. Happily they never reproduce and when they die they invariably go to hell."

The fact that he might have said "the typical banker" instead, and thereby drawn sounds of assent from an equal number of readers, is neither here nor there. The quotation is given because it reflected the opinion of the times, which to a large degree has been inherited by present day sales executives (and others!) and serves very well as an introduction to a dissertation on purchasing agents, how they got that way, and what can be done about it.

Misunderstanding

What follows is directed mainly to those who will disagree with it, for if they are "given to think" as the French have it, its object will have been accomplished in part at

M. C. RIDER

Purchasing Agent Willson Products, Inc. Reading, Penna.

least. Our premise is, that by a great part of industry, the purchasing agent is regarded as a nonentity, a necessary evil, to be circumvented when possible and suffered, though not gladly, when required. In proving this, we shall attempt to show that this impression is most expensive to industry and that its correction lies both in the hands of management and in those of purchasing itself.

Wherever the purchasing agent is regarded as a major executive it is because he has earned that distinction. This is also a reflection of management's attitude toward the function of his office in these particular instances. The reverse is equally true, with particular emphasis upon management's attitude. The true position of the purchasing agent in industrial procurement needs no justification when fully understood. The attitude of management toward it, does.

In defense of this last statement, we refer to a series of advertisements sponsored in 1935 by the publisher of a group of well-known trade papers. The general tone of these advertisements created the impression that the purchasing agent has only a minor voice in the

investment of his employer's money in articles prospective advertisers might list in these magazines. In justice to this publisher it should be said that as the result of interesting correspondence of a critical nature from several purchasing agents, more recent advertisements show a more constructive attitude which should help the cause of both sides.

This publisher's original viewpoint clearly showed a definite and generally current misconception common to sales minded executives of the functions and prerogatives of any purchasing agent deserving of the title. It confirmed fully the statement of Howard T. Lewis, Professor of Marketing, Harvard Graduate School of Business, who recently said: "Of all of the major functions of business, one of those least subjected to critical analysis either from a broad social point of view or from that of management of the individual business unit, is that of industrial purchasing Few sympathetic attempts have been made to understand either the purchasing function itself, the problems of the purchasing office or the character of the changes developing in the attitude of progressive management (the italics are mine) toward the task of procurement. Yet, on this insecure basis, sales managers as well as other students of marketing, have endeavored to erect a profitable sales structure."

Misinformation

As further evidence of the incomplete and inaccurate understanding of the place of the purchasing agent in industry, we find the following in a book published in the fall of 1935 on the principles of

marketing, by a professor teaching this subject in a mid-western university:

1. A chart listing fourteen titles of individuals, from Boards of Directors down to foremen, who have more or less authority concerning industrial purchases—with the purchasing agent omitted from the list.

2. "Purchasing Agents" see "Agents"—this in a 16 page index—which reference when hunted down, classes purchasing agents with resident buyers as "independent middlemen."

With this disarray of misinformation we offer as a gross inconsistency the alibi of the salesman who so often states his inability to make headway with certain prospective customers because of the purchasing agent. If the purchasing agent is such an unconsidered trifle in the eyes of the seller, how does the salesman manage to get by with this excuse?

When one considers the hundreds of opportunities available for training salesmen compared with the pitiful few available for the adequate training of buyers, it would appear that in arranging the curricula of the former a number of good bets have been overlooked.

Purchase Volume

In 1929, 210,959 manufacturing concerns spent \$36,683,000,000 for raw and partly finished materials, exclusive of fuel. This sum represents the largest single item of cost for the average manufacturer and when combined with fuels, equalled 54.7% of the value of the total output for that year. Even in these days of "planned economy" when our eyes are accustomed to figures of such size, this is a considerable sum to be entrusted to individuals who

are relegated to second or even third or fourth rank of importance or, in some instances, eliminated entirely from the scheme of selling. But the purchasing agent is not concerned with this phase of it at all. What he knows (which management is frequently prone to overlook) is that this item of cost is inanimate and controllable when compared with industrial personnel and therefore capable of producing very definite economies.

Purchase Methods

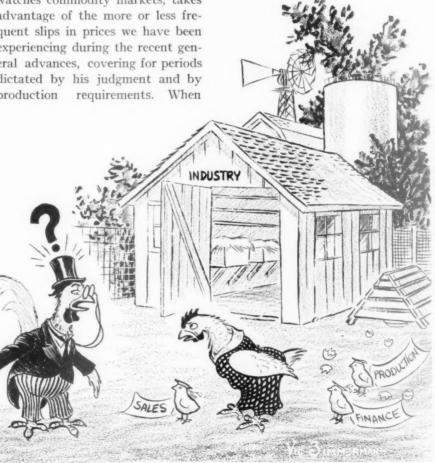
To obtain them he resorts to research laboratories, keeps his eyes and ears open for new materials and processes that might be substituted for others more costly; revamps his inventory and stores control, his specifications; watches his transportation charges, his discounts, his sources of supply. If he is most diplomatic and wise beyond his job, he makes bold to suggest changes in production set-ups, not infrequently discovering that it is more economical to buy certain parts than to make them in his own plant. He watches commodity markets, takes advantage of the more or less frequent slips in prices we have been experiencing during the recent general advances, covering for periods dictated by his judgment and by production requirements. When

the hue and cry of "chiseling" is raised against him, he says nothing but makes a mental reservation that it makes a difference whether you are on the buying or selling side of the table.

Working Together

Again we point to management and state that the realization of this evolution rests upon those who define management's policies. With the growth of the understanding of what the purchasing agent is doing will come the strengthening of his position. "Those who realize it will move forward; those who do not will be left behind"—again we quote Prof. Lewis.

The successful purchasing agent is under obligation to make every effort to understand the problems confronting management, irrespective of the degree of consideration he receives in solving them. But he cannot do this until management takes him into its confidence. There are certain cooperative measures he



has a right to expect of management if he is to accomplish the utmost in his field, for management dictates policies, the execution of which requires their complete understanding. With responsibility there should be given authority.

Donald G. Clark, then Purchasing Agent for Brown & Sharpe Manufacturing Company, stated this ideal condition in 1932 when he said: "I think I can see the time coming when the purchasing agent will be closer to management than ever before; when the information he gives is made part of the basis of the plans of the company; when those plans are automatically made known to him in full: when he becomes a sharer of the company's hopes, an advisor in its councils and a valuable worker in getting its results."

A New Perspective

To this end, which can lead only to improvement in and strengthening of the purchasing function, management is asked to broaden its perspective in this direction, to accord to purchasing a position equal in importance to that held by selling, finance and production. Where this condition exists it usually is with the larger concerns. If a company is of sufficient size to have a purchasing agent at all, it is defeating its own purpose if that man is not carefully selected and given every opportunity and encouragement to conduct his own department with the same freedom and responsibility that rests with other major executives.

Is there any other job, save that of the general manager, brought into such direct and intimate contact with all other departments? The spending of every dollar involves, at some phase—production, sales and finance in his own organization. It deals not only with markets, money and merchandise, but men, human beings with the understanding of their whims, foibles and beguilements; with economics, the laws of supply and demand, with transportation, psychology, management, chemistry, mechanics and

in some cases, even with speculation. If management is aware of this and fails to extend to the purchasing agent the degree of cooperation it is so constantly urging from those it employs, there exists a onesided arrangement which is neither efficient nor fair to either party.

Costs and Prices

We are entering a phase of recovery, which if not carefully watched, and with some change of heart and principles on the part of management regarding prices, is very apt to lead us back to the same point we found ourselves in 1929. If management has learned anything during the past five years, the purchasing agent will play no small part in helping to avoid some of the pitfalls into which business has fallen in the past.

G. A. Renard, Executive Secretary of the National Association of Purchasing Agents, recently stated: "Many of our most worth while economists have for years felt that our industrial system would break down if we did not permit prices to accurately reflect costs. Of course we know that much of the result of the past few years has been due to a failure to recognize that fundamental—the results being increased profits plowed into increased capitalization, which in turn increase costs because that capital had to be reimbursed in the form of dividends, and so on-in a vicious spiral to the point where our production could not be absorbed by our purchasing power..... I am very hopeful that there will be a similar recognition that the purchasing function of industry is the efficiency engineer or governor, which must see that unreasonable costs are not reflected in unreasonable prices because the result is a breakdown in our economy."

In 1929 only 80% of this country's productive capacity was employed we are told, and only $66^2/_3\%$ was the average from 1922 to 1935. It is believed that had the slack capacity been kept in operation with due regard for prices, sufficient income would have been produced to have

raised the earnings of all lower classes above the \$2,000 mark!

However, and here is the meat of the nut, it was during the greatest period of prosperity that the disproportionate sharing of income existed, for between 1923 and 1929 industrial wages and salaries advanced only 10%, corporate profits 31%, with cash dividends making 57% increase. The result was inevitable. The consuming public was unable to buy enough and consumption dropped behind production. While retail prices and wages remained practically stable, the volume of production increased. Dr. Howard G. Moulton's conclusion is, that if an equitable distribution of wealth is to be reached, price policies must be revised so that the consumer receives the benefit in the form of lower prices resulting from expanding production and decreased cost of manufacture.

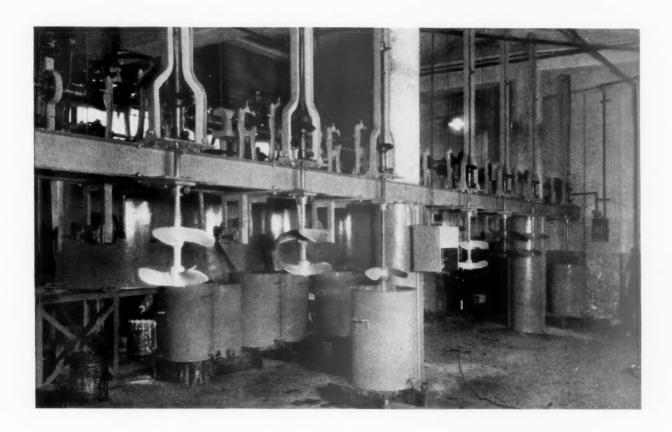
Profit Possibilties

To quote Mr. Renard again: "Industry is, in its simplest terms, two conversions: the conversion of money into material, equipment and labor, and the conversion of the product of that combination into money... We found some years ago that profit was just as possible in the first conversion as in the second. And in this highly competitive period we are apparently to be in for some time, the savings to be made through the proper procurement of materials on a value basis, is in many instances the only real profit to be had."

This puts it right back upon the purchasing department. If, therefore, management will give at least half an eye to its Ugly Duckling, it is apt to find at least a few swans where it had perhaps thought to find geese. History has it that a flock of geese saved Rome upon one occasion, and history has a most disconcerting way of repeating itself.

We do not throw out the suggestion that the purchasing agent is the unrecognized savior of business in the present economic maelstrom. That modest pronouncement is left

(Continued on page 47)



When you're buying GEARS

on an inquiry for gears is a problem that has bothered not only purchasing agents, but manufacturers as well, for the mass of detail that is involved in even a simple transaction of this sort is likely to make it rather a fussy proposition.

As an item of power transmission equipment, gears must be right for the service which they are to render, and there are a great many from which to select, both as regards the materials of which they are made and with respect to design. Consequently if the information concerning the gears covered in an inquiry is not sufficiently specific, the manufacturer has to make a guess at what is wanted. Different manufacturers make different guesses, and

be sure that your specifications describe the product you need, and that quotations from different makers cover similar items

FRANCIS A. WESTBROOK

Consulting Engineer

the result is such a wide divergence of prices coming in that it is likely to be bewildering. If the manufacturer is conscientious, he will write back for the information which he needs in order to bid on what his knowledge tells him will be the most economical and serviceable. In fact an engineer of one gear concern has said that very few orders go through his organization on which time does not have to be taken to write letters and find out the additional details which are necessary. This is why purchasers frequently have slow answers to their inquiries, widely

differing prices, and a lot of extra correspondence.

To overcome the difficulties just outlined, the American Gear Manufacturers' Association has developed standard inquiry forms covering the usual types of gears, which they strongly recommended prospective purchasers to use in order that they may get prices from the different manufacturers based on the same or comparable items. It also makes it possible for the manufacturers to make intelligent recommendations. Some of these forms are reproduced in connection with this article. It

Constance Ref. Address Date Sent in by Commercial limits are used unless otherwise specified.		Forms similar to these, adapte all types of gears, insure compunderstanding between buyer seller as to what is wanted.	
	STATE IF PIXED GIVE LIMITS	•	
	BEVEL GEARIN	NO INQUIRY	
SPECIPICATIONS	Customer	Ref	
	Address	Date	
QUANTITY	Sent in by		
MATERIAL	Commercial limits are used unless otherwise	specified.	
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ANGLE, MERINAL PRESSURE			
ANGLE, NORMAL PRESSURE		STATE IF FINED GIVE LIMITS	
ANGLE, NORMAL PRESSURE TOOTH FORM, STANDARD OR STUB		STATE IF FIXED GIVE LIMITS	
ANGLE, NORMAL PRESSURE TOOTH PORM, STANDARD OR STUB REYWAY SIZE, IP DESIRED		STATE IF FINED SIVE LIMITS	
ANGLE, NORMAL PRESSURE TOOTH FORM, STANDARD OR STUB		STATE IF FISCO	
AMGLE, NORMAL PRESSURE TOOTH FORM, STANDARD OR STUB MEYWAY SIZE, IF DESIRED SETSCREW SIZE, IF DESIRED LOCATION OF SETSCREW WITH KEYWAY		STATE IF FIXED SIVE LIMITS	
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may plan it i of t save ceiv trul cover the same gears.

Using the Forms

It is very necessary to fill in the dimensions in the diagrams. These are limiting factors which must be conformed to and are the basis of any proposal. When it comes to filling in the specifications below it is equally necessary to cover all the Sometimes all that is details. needed is to write in "standard" under such headings as "tooth form" and those following. Or if the number of teeth, pitches, etc., which should be used are being left to the manufacturer, the answers to the last four headings, plus the dimensions on the diagram, will enable him to make intelligent recommendations. It is hardly necessary to stress the advantages of ordering, or making inquiries, in this way and it is a great improvement on just asking for a "gear" without even giving the number of teeth or the diameter, as actually happens at

When taking the trouble to make out these forms, it is worth while remembering that there is no more advantage in having better and more expensive gears than the service calls for, than there is disadvantage in not having them good enough. That is, like any other piece of equipment, they should be right for each particular job.

In purchasing gears it is evident, therefore, that the manufacturer's ability to make proper technical recommendations and his ability to make what he recommends be taken into consideration. Price is of course important. Perhaps even more important is the fact that gears are often a part of production machinery and must function with

reliability if schedules are not to be upset. Thus gears must be cut accurately, with proper curvature of the teeth and uniform spacing to get maximum life and quiet operation. Efficiency and length of life also depends in part on having the holes ground before the teeth are cut so that all diameters will be accurately concentric. The finish given the machined surfaces of the teeth has a bearing on the amount of wear which takes place and the satisfactory performance of the gears, especially with heat treated gears. Rigid inspections are also essential to maintain uniform quality and to insure that the raw materials and production operations are carried out according to specifications.

Technical Factors

The importance of competent technical advice when securing gears for a specific application becomes evident, also, when one considers the many types available. Thus there are spur, helical, herringbone, bevel, miter, worm, spiral, internal and other gears, racks and so forth. Each can be made of several different kinds of material such as steel, cast iron, bronze, non-metallic materials, etc., depending on the conditions of service. Then there is the question as to whether the best results will be obtained by heat treating, whether that should consist of case hardening or hardening all the way through, and whatever is decided upon in this respect determines the kind of steel to be used.

For instance, 20 carbon steel may be used without heat treatment and give excellent results under certain conditions. But if the load is impulsive—that is if it has sudden shocks-extra strength is required. Or extra strength may be desirable where friction losses must be kept down by the use of narrow teeth. For such conditions the gears may be case-hardened. This gives them double the strength and reduces wear to such an extent that their life is greatly increased. In other cases where still greater strength and durability are called for, steels with higher carbon can be used and the gears heat treated. Sometimes the use of a higher carbon steel obviates the expense of case hardening and still provides sufficient strength. Thus worms are frequently made of 40 carbon steel without heat treatment. An alloy steel containing nickel is used for the pinions of helical gear drives because of the heavy service.

Many gears are made of cast iron. They are economical and of sufficient strength for many applications where the drive is steady and the load constant. However it is necessary to use a high grade close grained iron which has been carefully selected in the raw material state

Bronze is frequently the most satisfactory material to use where there is exposure to the weather, or to corrosive fumes or liquids, as in the chemical industries. The composition of the bronze is something which must be developed from the standpoint of its special adaptability

Non-metallic gears made of fabroil and textolite and similar materials are used where quiet drives are a major consideration.

Worm and Spiral Gears

Worm gears have the advantage of making possible very large reductions in speeds, quiet operation, great strength and non-reversibility. In addition several different speed ratios can be obtained on the same shaft centers. The worm and worm gear should be of different materials to give the best results. Thus a cast iron gear should be associated with an untreated steel worm. A stronger drive for long continuous operation is a bronze worm gear with a hardened steel worm having ground and polished threads.

Spiral gears made of different materials give more satisfactory results, as in the case of worms and worm gears. Steel and bronze are usually preferable. However, case hardened spiral gears may be used together for relatively light loads and slow speeds. In this case the purpose of the case-hardening is to offset the tendency to wear resulting from the sliding action of the teeth which will greatly shorten the life of the gears if not provided for.

Sometimes special provision must be made for the proper installation of the gears. A good example of this applies to spiral miter gears. The forward thrust of one of a pair of such gears causes a backward thrust of its mate, but when there is a sudden stoppage this thrust is suddenly reversed. Consequently thrust washers or thrust ball bearings must be installed to take up this force.

Summary

Naturally this is only a very brief outline of some of the more common matters which must be taken into consideration when gears are selected for a given service. Not infrequently it is more trouble to get the right gears for some job which in itself is small than to select a machine tool costing thousands of dollars. It is a highly specialized branch of mechanical engineering, and the only way in which purchasers of gears can hope to get the service which they need is to give very full and complete data to the manufacturers at the time of sending the inquiry. And the simplest way, by which quick action may be secured and much correspondence avoided, is to use the standardized forms already mentioned, which enable all the manufacturers to whom inquiries are sent to figure on an equal basis. Then if a standard gear will fit the job it can be taken from stock and shipped without delay, and if a special gear is necessary it can be specified with a full knowledge of what is expected of it.

These standardized forms were agreed upon as a matter of urgent necessity in order to meet a chaotic condition in the industry and are carried by the gear manufacturers' salesmen. Purchasing agents will save themselves and their companies a great deal of trouble and expense by cooperating in having the forms properly filled out.



P. A.: "Yes, we're interested in your proposition. In fact—without obligation on our part, of course—I'll go so far as to let you put in one of the machines for a ten day free trial."

SILHOUETTE STUDIES

2: William Buchanan Gold

HIRTY-SIX years in purchasing and for one companythat is a record of which William B. Gold is justifiably proud. The record started in 1900, when he joined The Electric Storage Battery Company, at Philadelphia, as a clerk in the purchasing department. In 1913 he was appointed purchasing agent. He retains that title, but in the intervening years his responsibilities have increased in keeping with the tremendous production and market expansion of the company. For example, he has spent more in one day for a single commoditylead-than the entire yearly purchase budget of the company when he entered its employ.

Bill Gold (he likes that intimate form of address) exemplifies the prime of life. Born April 17, 1880, at Philadelphia, he claims to feel as young at fifty-six as when he was thirty. More important, perhaps, is the fact that his looks support the claim. Though he is no longer given to strenuous athletics, his powerful physique still hints of the days when he played semi-pro football and cleaned up many local champions at tennis.

As a youngster, Bill planned to study medicine. He has never lost the professional instinct which inspired that ambition. Today, if he were confronted with one of those "—And Sudden Death" accidents, he could be counted on to render able assistance to the victims without experiencing the ordinary layman's revulsion at the sight of physical horror.

His plans were disrupted when his father died. Bill was sixteen at the time. As the oldest of the family he felt the responsibility and determined that he should at least support himself, so he decided on business as an alternative to medicine. At the completion of his high school course he landed a job as bookkeeper at a wholesale fruit house, left it for a better berth in the offices of the Reading Railroad, and at the age of twenty started on his real career with The Electric Storage Battery Company.

Retrospectively, Bill Gold may have moments of regret that his youthful ambition to be a physician was not realized, but those moments are rare. He likes purchasing and frequently declares that he would choose it as a vocation if he were beginning his business life again. He emphasizes that viewpoint by saying there has never been a day when he entered his office in the spirit of: "Hell! I've got to go to work."

That love for his work, combined with study and mastery of all jobs in the purchasing department, equipped him for promotion to the purchasing agent's berth when the opportunity developed. Even today he boasts of his ability to step out in the purchasing department and handle any part of the routine. More, he contends that he can beat any member of his staff in expert and efficient performance of any job in the department, because of his long apprenticeship, broader experience and mature judgment.

IIIS philosophy of studying the other fellow's job is the rule in his department. When the need arises, any of his assistants can handle responsibility or routine which technically belongs to another. Thus there is no delay or disruption when one of the staff is absent.

In the ante-room to the department there is a buzzer which a visiting salesman may press to summon an attendant. On the wall hangs this sign:

We appreciate the value of a salesman's time and assume he is entitled to prompt and courteous attention.

If you have not been granted an interview by a representative of this Department at the expiration of five minutes after your card has been presented, will you please push the buzzer again.

WILLIAM B. GOLD Purchasing Agent

The sign means what it says. Bill Gold is a firm believer in promptness, courtesy and consideration in dealing with salesmen. Any salesman, no matter what he is selling, can get a quick interview with a responsible member of the purchasing staff. Bill preaches and practices that principle as a factor in cutting the cost of selling. He believes it is good business to accord to all visiting salesmen the respect and attention merited by his own company's representatives on their business calls.

THAT is one reason why salesmen and sales managers generally like Bill Gold. Another reason is the reliance he places on them. On the whole, he regards a man to whom he has awarded an order as his representative in seeing that the contract is properly and adequately performed. The salesman who accepts and fulfills this responsibility is in a favorable position for repeat business, for Bill does not switch sources of supply indiscriminately. Instead, he selects them carefully, particularly with regard to probable permanence of business relations, cooperates with them to hold selling expense and general costs to a minimum, negotiates firmly but scrupulously for advantages warranted by the nature and volume of his company's business, and then sticks to them so long as they justify his confidence. Some of the concerns from which he buys have dealt with him for the entire thirty-six years of his purchasing experience.

BILL GOLD'S popularity is not confined to sales circles; it embraces a wide following in his own vocation. His acquaintance among purchasing agents is extensive, for he was a pioneer in association work. A charter member of the Purchasing Agents Association of Philadelphia, founded in 1914, he was the third president of that organization.

Shortly after the Philadelphia Association was organized, the National Association of Purchasing Agents entered the field. A firm believer in the general purposes and possibilities of that movement, Bill Gold bitterly opposed its original constitutional form. Under that constitution local associations were required to surrender control of their finances and activities to the national body. Bill maintained that the national organization should have federating authority, combining the locals for activities and standards of national scope, but without destroying the autonomy of local associations on matters of local discretion. As a result an extensive movement started to change the form of the national organization.

That purpose was achieved at the second convention of the National Association of Purchasing Agents, held at Pittsburgh, in 1916. The constitution of the association was rewritten to cover the disputed principles, the warring local associations immediately joined the National movement, and with its pressing inner problems settled the National Association of Purchasing Agents began its real career of service to the purchasing vocation. Incidentally, Bill Gold's leadership in the struggle was recognized by his election to a vice-presidency on the national board.

BUT the victory, which had gained for Bill the reputation of being a stormy petrel in association

circles, cost him a personal triumph two years later. On that occasion he was presented by the Philadelphia Association as a candidate for president of the national organization.

Under the conditions then prevailing a selection by the nominating committee of the association was tantamount to election. It happened that the committee was dominated by men who resented the active and energetic part Bill Gold had played in remodeling the association. They refused to nominate him. Unquestionably, he felt the slight, but he never manifested it by diminution of interest or participation in association activities.

The incident had an aftermath. A few years later some of the same men who had rejected his original candidacy approached Bill Gold and asked him to accept the presidency for the ensuing year. Perhaps he felt some personal satisfaction in declining an honor which he would have accepted on the previous occasion, but his declination was not based on pique. He refused the office because he could not devote to it the time and attention which he felt it demanded.

BILL has a pardonable pride in his ancestry, which he traces back to the Bohemian Brethren of the 15th Century. His forbears, coming to this country in the search for religious freedom, founded the Moravian Church in the United States at Bethlehem, Penna., although nowadays he is an Episcopalian. His family name is prominent in the annals of American history, not only in early settlement days but throughout the Revolution and in the formative period of the Republic.

He finds time for varied interests, as witness his membership in The Union League of Philadelphia, The Art Alliance, The Academy of Political and Social Science and the Pennsylvania Chapter of Sons of the Revolution.

His conception of civic responsibility is shown by his participation in a survey of the departments of city government at Philadelphia, as conducted by The Philadelphia Committee and sponsored by The National Economy League. Also he is a member of the group working under Hiram G. Andrews, Chairman of Pennsylvania State Educational Costs Survey Committee, with a view of reducing costs and correcting weaknesses in the state educational system.

He plays more than passable bridge, and enjoys reading, particularly biography and psychology. He shares with Mrs. Gold an intense appreciation of music, inspired perhaps by his own experience as a boy soprano in church and social circles in the days before his voice changed.

His greatest interest in life, however, is his son. Bill Junior justifies the love and pride of his father. Outstanding both scholastically and in extra-curricular activities at William Penn Charter, he duplicated that record at Princeton, graduating with honors and a Phi Beta Kappa key with the class of '35. Now he is at Harvard Law School, where unquestionably he will achieve further distinctions to gladden his father's heart.

THEODORE ROOSEVELT once said that every man owes a part of his time and energy to the development of the profession in which he is engaged. Bill Gold follows that axiom, but his only conceit in regard to his activities is that they may have contributed in small measure to elevating the standards and performance of a vocation which was largely held in opprobrium at the time he entered it.

He need have no doubt on that score. He is one of a tiny group which began some twenty years ago to inspire purchasing agents throughout the country with professional ideals. His contribution to the improvement of purchasing is tangible. There have been times when his advocacy has not been immediately accepted in association circles, but in the long run all the important principles for which he has striven have been incorporated in association policy and procedure.

-L. F. B.

Grinding Wheels

Keeping Step with Industry

When automobile manufacture started on a production basis, Alundum abrasive came into the field. With it came new standards of machining accuracy and speed.

The introduction of new alloys, harder materials, brought other Norton developments—abrasives such as #38 Alundum, Crystolon and Norbide

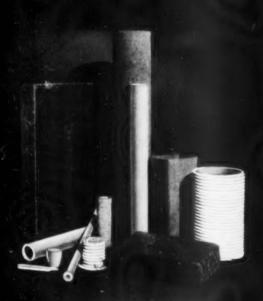
—new bonds, notably B bond; a manufacturing process by which wheel structure is controlled; wheels made of commercial diamonds.

Thus Norton abrasive products have kept step with developments in land and air transportation, communication and agriculture. Norton Research has kept step with the metallurgist and the designer.

It is the combination of correct abrasive, right type of bond and ability to duplicate the wheel hardness and the wheel structure that makes for correct cutting action.

NORTON ABRASIVES

Refractories



Modern industry uses heat in many ways. High temperatures—special refractories.

Norton research has developed many types of media for handling heat under a variety of conditions.

For example—Alundum and Crystolon Bricks, Plates and Cements for boiler furnaces, heat treating furnaces, melting furnaces, enameling furnaces, ceramic kilns.

Among the developments also is Alundum Laboratory Ware for ignition, incineration and filtration.

For aerating, diffusing and filtering liquids, solids and gases we have Norton Porous Plates and Tubes—highly efficient in many modern sewage plants of the activated sludge type.

Norbide



NORBIDE—the hardest material ever produced by man for commercial use—is one of the outstanding developments of the Norton Research Laboratories.

Industry has found many uses for Norbide—it is available in molded form where exceptional hardness and resistance to wear are desired and in abrasive form for jobs previously done with diamond dust—such as the drilling and lapping of cemented tungsten wire drawing dies. Norbide Pressure Blast Nozzles have made great savings in each industry where there has been a problem of fast

Norbide is the trade-mark for Norton Boron Carbide (B_iC).

Main Office and Plant
NORTON COMPANY
Worcester, Mass.

Electric Furnace Plant: Chippawa, Ontario:
Branch Grinding Wheel Plants
Hamilton, Ontario
Welwyn Garden City, England
La Courneuve, France
Wesseling, Germany
Corsico, Italy

Sales Offices: New York, Chicago, Detroit Philadelphia, Cleveland, Pittsburgh, Hartford London Paris

Poloors

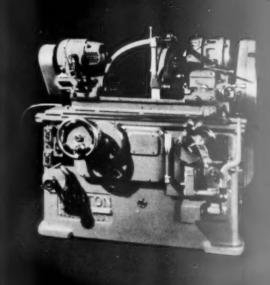


Non-slip tiles, treads and aggregates of Alundum abrasive are marketed under the name "Norton Floors." Because of the hardness and toughness of Alundum abrasive, so efficient in working steels and other metals, a walking surface containing a correct proportion of it is sure to have wear-resisting properties.

Industry finds the Alundum Rubber Bonded Safety Treads excellent for stairway maintenance—likes its permanent safety, its easy application. Cement floors reinforced with Alundum Aggregate have solved rather serious factory flooring problems—providing safety and durability.

Norton Floors meet about every problem where a non-slip walking surface is desirable to eliminate a slipping hazard.

Machines



THE Cleveland show crowds marveled at the Norton D-86—a hydraulically operated machine for grinding pins of crankshafts.

Another new and appealing design was the Cam-O-Matic for automatically grinding the cam contours of camshafts, electrically controlled, hydraulically operated.

They are two examples of the line of Norton machines designed to meet specific requirements of modern industry.

Other recent designs are the Type "C" line of cylindrical grinders with semi-automatic, plunge-cut and traverse models, the small Surface Grinder, two Tool and Cutter Grinders and new Lapping Machines for both cylindrical and flat work.

Polishing Abrasives

Sharpening Stones

To meet present polishing wheel requirements attention must be given to character of abrasive, shape of grain, surface of grain, capillarity and to a uniformly sized product.

Six types of Alundum Abrasive—two types of grain shapes, three types of grain treatments in each—are available.

Norton Laboratories have a completely equipped polishing department for experimental work. The call for their services comes from the metal, stone and glass industries. A special product known as Norton Lens Finishing Flour is used in optical work. Especially prepared Crystolon Abrasive is meeting with a high degree of success for stone polishing

and in glass work.

Best known is the India oilstone—made of Alundum abrasive. If a slightly different cutting action is desired, a different edge required on the tool, a stone of Crystolon abrasive can be used.

The natural stones are: Hard Arkansas, Soft Arkansas and Washita. The sharpening stone catalog lists a surprising variety of shapes and sizes of sharpening stones, hones and abrasive files. The biggest surprise is the many shapes of small stones for die and tool work.

The sharpening stone line is sold by Behr-Manning, division of Norton Company, Troy, New York, manufacturers of coated abrasives, sandpaper.

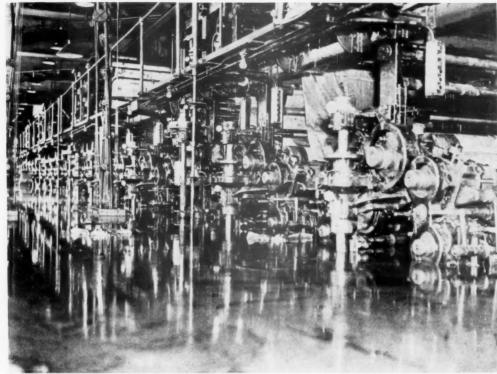
NORTON COMPANY

Worcester, Mass.

Behr-Manning Corporation, Troy. N

NORTON ABRASIVES

S - O - S!



Acme

On the sea, these letters are the signal of emergency and distress

During wartime, they stood for the Service of Supply

In the Pittsburgh flood, the two terms were synonymous

Here's the story of how Pittsburgh buyers rose to the occasion

Association of Pittsburgh held its regular monthly meeting. The session was longer than usual and toward the close an influx of telephone calls came for various members. It was not a check-up of anxious wives wanting to know why their husbands were delayed. The calls were from plant officials—the flood had a large part of industrial Pittsburgh in its grip and there was important work ahead for buyers.

Little could be done that night except to formulate lists of supplies and equipment which would be needed to cope with the disaster and to lay plans for procuring them. Apparently no anticipatory buying of consequence preceded the flood, although here and there the threat of rising waters had led to some precautions.

For example, one large plant was well stocked with rubber boots, a valuable and scarce item in the days that followed.

On the morning of Wednesday, March 18th, many buyers found themselves shut off from their plants and offices. The waters were still rising and most of the flooded areas were impassable except by boat. And boats were at a premium, most of the available supply being commandeered by the authorities for relief purposes.

All that Wednesday, with the swirling waters steadily mounting and the famous Golden Triangle of Pittsburgh's business district shut off and guarded by troops, marooned buyers established emergency offices. Some operated from their homes, others found quarters in hotels and buildings outside the stricken areas, still others established themselves on the sidewalks. They knew that sharp competition for available supplies was inevitable and they took what measures they could to insure that essential items would be on hand at their plants when the flood had subsided.

At nine o'clock Wednesday night the waters began to recede. On Thursday morning most plants could be reached by waders in rubber boots. Then the real buying operations of the emergency period began.

Telephone service was practically out of commission. A few fortunate plants had a single connection and all important concerns had one or more connections assigned to them at telephone headquarters. For buying

purposes, however, the telephone was impracticable because most of the distributors from whom goods might be bought had no service.

As a substitute, the telegraph came in handy. A tremendous volume of business was transacted between buyers and sellers within the city by means of telegrams.

By and large, however, the emergency purchasing problem resolved into a question of personal contact with suppliers. Employees of all other company divisions were impressed into service by the purchasing department. Engineers, salesmen, clerks, every type of salaried employee whose normal work was interrupted until the plant could resume operations, became messengers for the purchasing department.

Purchasing agents themselves went out into the streets, hunting down suppliers who might have goods or equipment in usable condition. There was no haggling over prices. When a buyer or his representative found anything that was needed it was purchased or rented on the spot. The immediate demand was for rubber boots, pumps, shovels, wheelbarrows, waste, rags, oils, sawdust, gasoline, kerosene, lime and cleaning agents of every description.

Routine largely went by the boards. For one thing, stocks of purchase orders and other printed blanks at many plants were destroyed by water. For another, it was impossible to determine what an order should specify until the material was actually located and inspected. Consequently, transactions were by word of mouth or roughly scribbled memoranda. The procedure adopted by most buyers was to issue formal orders as bills came in.

The problem of delivery was up to buyers to solve, as merchants and distributors had no facilities for immediate delivery. Where company automobiles were not available, buyers utilized employee cars. More than one ancient automobile wheezed through the streets, bearing a placard to indicate it was on emergency service for a large and wealthy corporation.

When goods were located, other problems arose. For example, one buyer seeking soda ash found all and more than he wanted, but it was warehoused on the third floor of a supply house with no elevator in operation. The buyer promptly sent over two men with a block and tackle. They climbed to the third floor, rigged up the tackle in the elevator shaft, knocked a hole in the roof of the elevator cage and then lowered the 200-lb. bags of soda ash to the ground floor.

Among buyers in Pittsburgh there is universal commendation for the efficient service rendered by distributors. Some purchasing agents who had heretofore frowned upon middlemen as a costly agency of distribution now found them indispensable, and it is probable that many good will relations of permanent value were established by distributors during the emergency.

Salesmen also came through with flying colors. In many cases where they could not furnish materials direct they provided information as to available sources.

One buyer who had long maintained a file of salesmen's names and home addresses used the record to good advantage. He telephoned a number of salesmen residing in or around Pittsburgh, and each of them volunteered to help him locate what he needed outside their own particular lines. With the gradual resumption of telephone service, salesmen called purchasing agents at their homes to proffer special service or information. That was the only way they could reach purchasing agents, for during the day most buyers were out in the market place searching for what they needed.

Naturally there was some price exploitation, but on the whole there was no indication of profiteering by manufacturers or distributors. In general they gave fair treatment and generous cooperation to old and new customers alike. The calamity aptly demonstrated that buyers and sellers are brothers under their skins, for remarkably few disputes appeared to have arisen over the multitudinous transactions which were completed with little negotiation or formality.

When one market failed the buyer had to find an immediate substitute. Thus the purchasing agent of one of Pittsburgh's largest corporations discovered one morning that his supply of sawdust was shut off. He had been getting it by single carloads, using up one car before ordering another to come forward. Another purchasing agent stepped in and contracted with the supplier for all his available sawdust, taking delivery on the spot. This man over-bought, however, and later, when conditions were approaching a reasonable normal, he called up the first buyer and offered him half a dozen cars. It was not taken, for in the interim lime had been tried as a substitute and found even more satisfactory. There was considerable interchange of equipment among buyers, one loaning or renting it to another when it had given the necessary service at his

Machinery and equipment then had to be dismantled for thorough cleaning and repairs. Perhaps the most acute problem at that stage was the drying out of electrical machinery. Plants with oven facilities of their own were in an enviable position but a decided minority. All outside oven capacity was taxed to the utmost for drying operations. Here, too, the system of priorities prevailed, and equipment of the water and electric utilities had right of way because the resumption of their service was an essential public interest. A buyer who rejoiced at the information that his motors had just entered the ovens to begin their long process of drying out might get a rude shock an hour or so later at learning that his motors had been taken out to make room for equipment owned by a utility.

Tractors were in great demand. They were bought or rented, where they could be found, and hooked up with motor-generators to provide emergency lighting for night work. Among the novel items bought in quantity and soon becoming scarce were electric handirons. These were used for restoring water-soaked records, drawings and tracings to readable condition.

(Continued on page 38)

In defense of

BUSINESS ENGLISH

ECENTLY, a wave of articles pointing the finger of disdain at the hackneyed phrases used in business letters, has rippled across the pages of the trade magazines all over this country. Now that it has spent its force and started to recede I rise to refute some of the gall of its scorn. The other day I even presumed to rebuke my friend the Professor of English Language when I found that he was indoctrinating his students with the selfsame dogma. However, I can find it in my heart to forgive him, for that is the orthodoxy of his calling. And knowing college students as I do, I consider that they are certain to backslide as soon as they are removed from the influence of his spell. But for hard headed business men all over the nation to swallow the pill without audible protest is truly a testimony to the state of complete submission into which they have been beaten by the blows of the recent depression. And so I point a disdainful finger at that disdain and deign to resist its implications.

What I said to the Professor was something like this: I am conceited enough to value my time and my secretary's time too highly for me to keep her sitting with pencil poised for minutes at a time while I engage in the throes of intellectual labor trying to give birth to some literary gem that will be original and meaningful to take the place of my so-called meaningless and hackneyed "hoping to receive your early reply, I remain," etc.

I can forgive him, I say, and I am sure he will forgive me when he reads this little brainstorm. He will probably tilt back in his chair and laugh indulgently, or he may read it to his class in Business English as a light interlude between his philippics on the split infinitive, or perhaps as a horrible example of academic retrogression.

I have been moved, on occasion, to mentally translate some of my average business letters in accordance with the dictates of these self appointed literary Moseses by eliminating the disdained expressions and substituting the very personal "I" for the more or less impersonal "we;" and then in my mind's eye I have followed the letter to its addressee victim in some Chicago Maelstrom of merchandise. What I invariably see there is the recipient giving a series of little jerks of the shoulders as he comes one after another to the old familiar spots and finds, not the old familiar phrases, but some bit of cozy originality or breezy chit-chat. He utters an involuntary "Umph!" at the cheery little individualized complimentary close, so that the wage slave in shirt sleeves at the next desk looks up apathetically to see whether this is another funny story about to be unloaded on him. But the victim merely spits his disgust into the cuspidor and says, "Now what the hell is the matter with that bird?" as he stuffs my letter into his work organizer under the flap marked: To be answered if I ever get time.

No! I want my business letters to be businesslike, and business loves its familiar outward forms.

I might say to my Professor friend, "What do you say when you are introduced to someone?" and he would probably reply, "I am glad to know you," or something very like it. There I would have him in the grip of my deadly rebuttal. "Ah!" I would exult, "That is hackneyed in the extreme, and in all likelihood a prevarication as well (unless the someone happened to be a charming co-ed)." You see what I mean. Some variation of "I'm glad to know you" has been extant ever since Eve presented Adam to the snake, and now every salesman uses it and nearly every purchasing agent echoes it right back. It covers the situation comfortably. Its content of real meaning is manufactured subsequently as the interview ripens. It might even conceivably be that the literal truth of it should occasionally be verified. If the salesman should actually get that order and if the purchasing agent should actually live to see the goods he ordered appreciate in value they might both really be glad they met. But when they were introduced, as much as they might have suspected each other, neither would have omitted that bit of ritual for the world.

Now, if you should find your own sentiments reflected in this monograph, you mustn't take too much for granted. There is an aristocracy among hackneyed phrases. I wouldn't stoop to using some of them that perhaps have rolled off your plebian tongue. You won't find "Yours of the twenty-eighth proximo to hand and contents noted," in any of my patrician business letters. Oh no! But I have been known to go as far as "Thanking you, I am."

I don't often object to the customary phrases I find in my office mail, but I'll confess I might be a bit disturbed if I should open the familiar yellow envelope some bright Saturday noon and read, "Please find enclosed herewith payroll voucher number twenty-three thirteen, which terminates your connection with this institution as of the tenth instant." That eventuality would probably move me to reply "I beg to remain."

Your faithful servant,

LESLIE F. ROBBINS

Purchasing Agent University of Colorado Boulder, Colorado

F. O. B.

(Filosofy of Buying)

SQUADS right! There seems to be quite a military flavor to the incoming N.A.P.A. Executive Committee, what with Col. Allen coming on from Oakland, Col. Traill from Montreal, and Commander Tisdale, from New York. Honest-to-gosh commissions, too—none of your swivel chair or Kentucky varieties. Perhaps George Renard will have to be made a General Secretary to handle that crowd.

Curious Cuthbert wonders whether this means regimentation or just preparedness, and if so, for what. Well, for one thing, it means excellent leadership. And, oh yes—the Service, of course.

THE other day, the luncheon discussion turned upon the topic of ethics in buying, with rather a surprising divergence of opinion as various cases or circumstances were cited. Isn't it just as unethical toward your own company voluntarily to forego advantages arising from technical rights in a situation? What responsibility attaches to the buyer in safeguarding the vendor's interests? Is the epithet "hard-boiled" a stigma or a compliment? What is the dividing line between shrewdness and sharp practice? And anent the last mentioned point, the most pertinent comment was this quotation from a New England mother's advice to her son, about to start out on his own. They had gotten down to such homely details of conduct as how often he ought to change his shirt, and her sage counsel was summed up in five words: "If it's doubtful, it's dirty."

Ethics, says the Old Line Buyer, is one of those fine sounding words like manners, personality, quality, and service, that are meaningless without the qualifying adjective; we sometimes forget that there are good and poor varieties of each.

IN last month's French elections, it is reported that there was an average of eight candidates for every seat. Sounds like the waiting room on a P.A.'s busy day.

P.A.'s Mother Goose

Simple Simon
Met a buyman
Bound for the convention.
Said Simple Simon
To the buyman,
"Pray, would you care to mention
Why you should take
So long a trip
To make so brief a visit?"
Said the buyman
To Simple Simon,
"I can't afford to miss it."

The Grand Union Company has organized its junior salesmen under the whimsical name of "Sales Pups." Learning to be great big Order Hounds?

In This Issue

Leslie F. Robbins buys for an institution of higher learning, but his article indicates that he's far from academic in his business outlook. When you have read same, and contents noted, you'll agree.

"Bill" Gold is not to be confused with those gold certificates we had to turn back into the Treasury a while ago. This Bill is very much in circulation.

M. C. Rider's article is a good one to pass along to management. Incidentally, if you should take a ride to New Orleans this month, you'll have a chance to see and hear the gentleman in person, for he's scheduled to lead the discussion on relationships between sales and purchasing departments.

There is much to be said for A. J. Sidford's contention that the principal ingredients of good sandpaper are grit and inte-grit-y.

Liquid assets are theoretically all very well, but Pittsburgh executives agree that there can be too much of a good thing. Meanwhile, the story of how Pittsburgh P.A.'s managed to do an effective job under the recent emergency conditions is chock full of human and professional interest.

Selecting a Source of Supply for COATED ABRASIVES

Confidence and satisfaction result through dealing with a manufacturer who is qualified by experience, technical facilities, and proven business integrity

A. J. SIDFORD

T is our belief that the most important single feature for the buyer of coated abrasives to consider is the company from whom he

We can hardly conceive that the type of man who reads these lines and who holds so responsible a position as purchasing agent, does not know about the various types of backings and the minerals used as the cutting agents on abrasive paper and cloth. Therefore we shall but very sketchily touch on that phase.

may buy.

Garnet—the same mineral used in jewelry—has a long, successful record for satisfaction in wood sanding, both by machine and hand. A comparatively recent patented heat process, licensed to several manufacturers, has still further improved the cutting and lasting qualities and the user of Garnet products would do well to check up to insure that his supplier is prepared to furnish the latest improved materials.

Aluminum Oxide

Having started on Garnet, now over fifty years in service in woodworking, let us continue a little further in this very wide and interesting field. In the last fifteen years or so, Aluminum Oxide, long and favorably known for metal cutting, and progressively developed in character, shape and ability to be bound more securely in the glue coating, has become an increasingly large factor in the rapid cutting and finishing of wood products.

Under high speeds and heavier pressures, and for continuous operation on the harder woods, today's abrasive paper and cloth with Aluminum Oxide as the cutting crystals can safely be awarded the palm for greatest efficiency. Electro coating-that process by which the individual grains are compelled by electrostatic force to stand upright and evenly spaced on the glued backing-has materially increased its cutting and lasting power. In many cases it has yielded 100% more in output. A fair measure of its improved action varies from 30

The same basic mineral, but varied in both character and shape of grain, has virtually become industry's only metal cutting coated abrasive. On cloth in varying weights, strength and flexibility, it does those hundreds of jobs by hand and belt machine. Made into cones and bands, it performs miracles as the cutting member of portable sanding tools. Coated on fiber combination backing and in disc form, it stands terrific strain in removing metal at a periphery

speed of over a mile and a half a minute.

Aluminum Oxide, both for wood and metal cutting, is available in electro coated form and warrants the interest of the careful buyer.

To those who have the responsibility of buying for shoe manufacturers and leather tanneries, Silicon Carbide must hold greatest interest. This exceptionally hard and sharp mineral has a real affinity for such operations. From rough heel scouring jobs requiring grits such as 50 and 60 through the bottoming of fine shoes with such numbers as 150 to 240, and down to those delicate operations of buffing hides with paper coated with such almost impalpable "flours" as 400 and 320, Silicon Carbide holds sway.

Fine Finishing

For still finer finishes in tanneries, flours of the finest Flint Quartz must be coated on paper of the smoothest surface. Just picture the refined processes which permit the even spreading of these air or water floated particles!

Again we meet with Silicon Carbide, and again to the finest limits in waterproof sandpapers for automobile body and metal cabinet work. Here grits as fine as 600 are coated with a synthetic varnish adhesive, the backing also waterproofed—a real triumph of the coated abrasive art!



Knowing what we do of the ranges required in coated abrasives, we repeat our belief that the one most important factor for the purchasing agent to consider is—the company from whom he may buy. Let him ask himself whether it has these qualifications:

Questionnaire

Has it stability, as witness a background of successful performance? The affirmative answer to this assures him of an uninterrupted supply of satisfactory products.

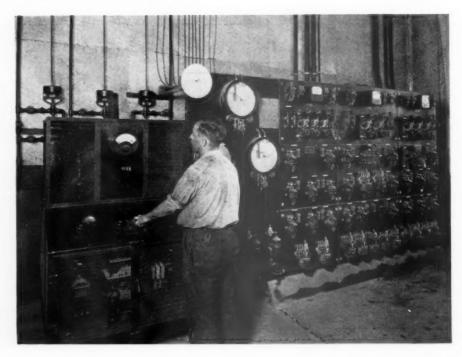
Has it the technical and manufacturing facilities to produce a complete line? This means from metal grinding discs of grit 12, graded through a screen with 12 apertures to the linear inch, to such water sanding and tannery products as grits 600, 500, 400. He may not need the extremes in his particular line of work, but the added assurance he receives in buying from such a supplier is always borne out in the quality of the materials they produce in the lines he does have occasion to buy.

Has it acquired, either as licensor or licensee, the right to manufacture those patented abrasive forms, now so very important to so many users? To be able to obtain an absolutely complete range of abrasive materials from one source is highly gratifying and works for the greatest simplicity in purchasing procedure,

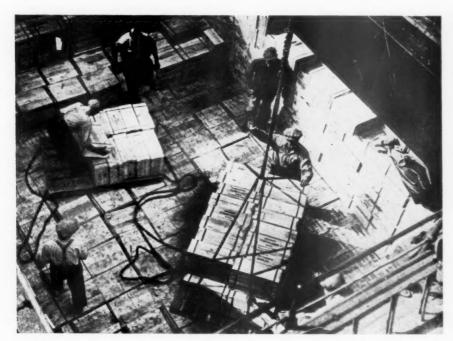
Has it a reputation for fair, friendly, business-like principles, policies and practices? If it has, his worries are immediately reduced to a minimum.

Has it an engineering or advisory force ready at a moment's notice to counsel him in the ever-changing problems of sanding? New materials to be finished may require new ways to do them and call for improved or novel forms of coated abrasives of which the buyer may not be aware. But the product engineers of an up-to-date coated abrasive manufacturer are in touch with hundreds of operations in hundreds of plants. What is new to the buyer may be capable of instant solution by his counsellor through many previous experiences.

This type of question might be added to almost without end but sufficient has been given to illustrate why we sincerely feel that the single, most important feature in selecting a source for coated abrasives is: The company from whom he may buy—what kind of a concern it is.



Accurate control of materials in the laboratory (above) and of fabrication in the plant (right) give assurance of a uniform product.



The Golden Rule of Trade

WALTER J. AUBURN

In a world practicing autarchy—nationalistic or economic self-sufficiency—a further note of isolation from the international scene is the cry of "Buy American!" The widespread front-page streamer brings much applause from those who know little about world trade and about the hocus-pocus of professional publicity.

Japan, Germany and Italy believe they are self-sufficient for military purposes (though trading circumstances have proven them decidedly otherwise) but they are not anywhere near the peak of almost perfect economic self-dependency of which the United States can boast. Yet even we Americans must import millions of foreign raw materials and finished products each year to complete our own products, an act which makes "Buy American" sound quite inconsistent.

Economic self-sufficiency in these days is dangerous, especially when crop surpluses, manufactured goods and raw materials must be marketed in other lands outside one's own borders. Economic self-sufficiency is an important status to a warring nation, overcoming any fears of economic sanctions and threats to incoming shipping. But this economic isolation, or autarchy, is one of those predictions of the millennium that no more can happen than nature's seasons can be changed.

Neither can a purchasing agent maintain himself as the representative of an economic self-sufficient organization in these world-trade days. Too many of his materials, even though they may be indirectly concerned with his product, come from other lands. In addition the buyer must be world-minded (not necessarily a member of the World State cult), a Jack-of-all-Trades who knows something about all products, sources, world economy and world politics.

Domestic employment during the depression was encouraged, but due to falling foreign markets it decreased. The result was less consumption and more If economic self-sufficiency is a myth, either as to source of supply or outlets for production, then international trade agreements are richly justified. Mutual advantage is the test; a study of import and export statistics provides the answer

surplus which could not be marketed out of the country because of the high tariff walls we had erected to protect our domestic labor. In retaliation, foreign countries raised their tariffs; our surpluses failing then to be sold within their borders. It was, and still is, a vicious circle of economics.

The same conditions—mutual high tariffs—caused slumping everywhere in industry. So much for what is past.

In the United States, foreign markets are exceedingly important, all reports to the contrary notwithstanding. American wheat, cotton, machinery, textiles, shoes, leather, automobiles, meats, office equipment, tractors and special machinery count on a good foreign demand to keep their factories busy and their employees well paid.

What would happen if our foreign markets suddenly refused to buy our manufactured goods and raw materials and we were left with these on our hands (as we have been to a limited degree during the depression)? The answer is a truly lamentable state of affairs. Yet it has been one of economic self-sufficiency for us since we are living on our own production—using or letting rot our surpluses of oils, ores, food products, and manufactured items. Payrolls and employment are still low, relief rolls high, and manufacturers dissatisfied with profits, over-abundant manufactured stocks and

unassimilable overhead. And if the government's new agricultural substitute for the AAA, predicted to be less of a commodity control, causes materially larger basic crops, then further surpluses will have to be marketed abroad. But how can they be thus marketed unless some reciprocal basis is established? By none other than trade agreements.

Trade Agreements

Trade agreements with "most favored foreign nations," such as those recently signed by President Roosevelt with Cuba, Belgium, Haiti, Sweden, Brazil, Colombia, Canada, Honduras, the Netherlands and Switzerland, with a limited one for Czecho-Slovakia, thus far, represent a noticeable betterment in mutual trade and in savings for manufacturers, as well as a possibility for American manufacturers to employ more help because of their increased foreign sales and their savings on imports.

Isaac Marcosson in the Saturday Evening Post proves an increase in employment possible in his article on the Swedish recovery, stating, ". . .Sweden's overseas business in many commodities is above the 1929 peak. More than one-third of Swedish workers are engaged on exports."

Preferential agreements and a consequent lowering of tariffs, an increase of the free lists mean more export sales together with cheaper import purchases.

This is where the purchasing agent comes in.

Import Purchases and Possibilities

The basic underlying purpose of trade agreements is to create employment.

The general belief in America that it is iniquitous to import foreign goods but that it is perfectly lawful to sell our goods abroad (the "Buy American" theory) has throttled trade to such an extent that it has become the source of gray hairs among every class of trade needing foreign markets. This mistaken idea has brought high tariffs by our government for foreign goods and a consequent loss of our foreign markets in retaliatory foreign tariffs.

While those poor people, ignorant of anything but the flag-waving "Buy American" slogan, attempt to scornfully oppose those who purchase abroad, they are guilty of further ignorance in being unaware that the foreign trade agreement does not ask buyers to purchase foreign goods in preference to American-made products, but that it does ask buyers to obtain those items in which the most favored foreign nation specializes.

The importing of foreign goods is important, and that fact will have to be recognized in order that our sales to foreign nations be increased. In spite of high-pressure selling, installment payments and a frantic scrambling for new markets within our own borders, practically no new domestic outlets for sales have been found. On the contrary, these outlets have decreased just as the foreign markets dropped when retaliatory

tariffs were made. Foreign markets then are the only solution for American production after its own consumption or effective demand has been satisfied.

The countries which, so far, have signed trade agreements with us account for 28.2% of our exports and 36.6% of our imports in the period 1930 through 1934. Agreements with seven additional countries are in the process of negotiation. These latter countries took approximately 8.8% of our exports and supplied 6.0% of our imports through that same period.

The trade agreements have not been in force long enough to obtain proper comparative figures, but the last four months of 1935 compared with that same period in 1934 shows an increase of 19.5% in our exports and 30.0% increase in our imports.

Cuba, Haiti, Honduras

For instance, in the trade agreement with Haiti* (taking effect June 3, 1935): for the last seven months of the year, the Department of Commerce reports that the value of our exports to Haiti was \$2,136,000, an increase over the corresponding period in 1934 when the total was \$1,714,000.

Buyers whose materials are imported, even though trading through import and export bureaus, should accustom themselves to reading government reports and copies of trade agreements, not only for their general knowledge but for their specific aid in purchasing. Import and export agents may fail to call attention to new prices, preferential tariffs and new opportunities that these new agreements have fostered. It is best not to rely on importing agencies or brokers where large purchases are involved. The purchasing agent should make it part of his own job to investigate his foreign sources in order that he may procure the lowest price, the nearest source and the quickest delivery. American consular, government and commerce reports can be secured through the Government Printing Office at Washington, D. C.; trade agreements through the Department of State, or digests of these through local Chambers of Commerce. Not only do these reports aid the buyer, but with export possibilities easier, they give the sales department "a break" on foreign markets.

Even though bananas are 95% of the Honduran exports to this country, other important items have been reduced in order that our exports of manufactured products to Honduras may be increased. Balsams, for medicinal, perfumery and cosmetic products, have been reduced from 10 to 5%. Bananas, sarsaparilla root, raw deerskins, cocoa beans and coffee are on the free list, while the duties on pineapples, guavas, mangoes and their fruit pastes are cut almost in half. This trade agreement went into effect March 2, 1936.

The export sales department benefits in this way: Dried skimmed milk import duty into Honduras has been reduced by 32%; butter, 68%; canned sardines, 67%; denim, 36%; certain pharmaceutical specialties, one-third, and another class, one-half; canned fruits,

73%; smoked meats, 37 and 51%; cereals, 50%; and shirts, 50%.

This proves reciprocal trade agreements mutually beneficial, even though selfish from a purely nationalistic viewpoint. For once in his foreign buying the purchasing agent can be said to reciprocate in a large way, the sales of his own export sales department. His purchases from countries with whom the United States has trade agreements give him not only a less costly finished product because of the lower duties but they add luster to his purchasing reputation with the sales manager who is always seeking reciprocity for the people to whom he sells.

Cuba has increased her American imports by 60% since September, 1935. Automobile imports alone were 227% higher than in 1934. America certainly has an "in" with the island, for on a tour through Cuba this January the writer saw electric refrigerators, automobiles, elevators, razors, soaps, radios, medicines and countless other products of American manufacture in the vast majority of items in daily use. There is no doubt but that Cuba, in consumption alone, is another American territory and a splendid outlet for our goods. Of course, 72% of our imported sugar comes from the island, as well as fruits, eigars, wax, vegetables and rum.

Reciprocal treaties seem popular, for reading in Havana's newspaper *El Mundo*, we saw that a deal with Norway for exchanging codfish for Cuban sugar was being negotiated.

Canadian Trade Agreement

Reciprocal trade agreements with Canada encountered much opposition in certain quarters. But it may not be remembered that during the year 1929, the tariff against Canadian products was greatly increased by our government, cutting imports and decreasing our exports to Canada by 66%. Our imports from Canada during 1929 were 503 millions; dropping to 232 millions in 1934, a drop of 54%. Both our agriculture and industry will benefit by this new trade agreement.

American buyers of Canadian products bought in 1929 goods of 135 millions value. Our new trade agreement reduces the duties on these articles, all of which were dutiable, about 79 millions of dollars, or a savings of 60% of this 1929 import total. If that isn't something to interest the purchasing agent, then no amount of reductions will awaken him to new opportunities and sources.

Canada has placed on the free list certain grades of wood pulp and other items that accounted for 44% of our total purchases from her during 1929.

January this year brought an increase of 15% in Canadian exports to this country, while their imports increased slightly more than 13%, or over 3 millions more. And this is the first month of the trade agreement's operation.

Reduced items favoring Canadian producers and American buyers comprise maple sugar, cattle and calves (mostly for breeding or fattening purposes), Cheddar cheese, frozen blueberries, timothy seeds, salmon, halibut, fir, hemlock, spruce, beech, larch and birch lumber, ferro-manganese, ferro-silicon, acetic acid (a large U. S. import item), talc, crude sperm oil, and whiskies.

Although the purpose of the trade agreement is to benefit American re-employment and to bring back some degree of profit and prosperity to the country, the benefits to American buyers are too large to be missed or neglected. The 60% savings in Canadian export duties on articles shipped into the U. S., or a net 79 millions savings on a 1929 basis, is an untold boon to buyers. The third benefit is to American sales departments for American machinery, electric dynamos, and many other items.

Swiss Trade Agreement

Our imports from the country of the Alps in 1928 amounted to \$42,895,000, while in 1934 they amounted to \$15,205,000. Note the large decrease in imports, then watch for the 1936 increase due to savings to American buyers. Swiss textiles are reduced about 22 to 27% in duty. Coal tar dyes are reduced 22 to 24%; files from 20 to 44%; synchronous motors for electric clocks about 50%; testing machines 27%; cheese 29%; while hat braids, formerly taxed 90%, now read a 45% duty.

The Buyer's Interest

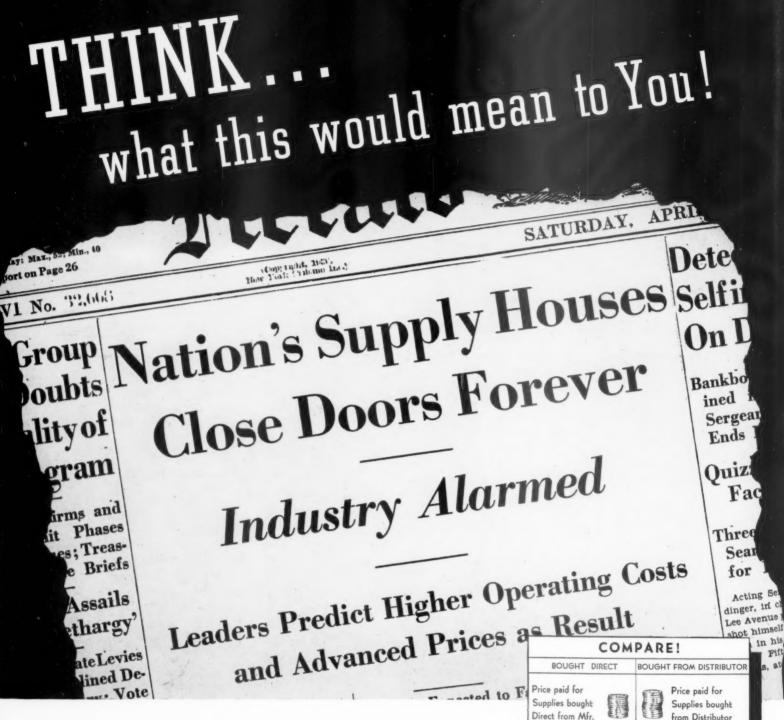
Purchasing agents engaged in the buying of countless items, will realize that many of their purchases in a finished state are made up in part of foreign goods and raw materials. These goods imported under low and friendly tariffs, promulgated under the new foreign trade agreements, will naturally be sold at lower prices.

Therefore the buyer's attention to governmental reports on foreign trade is no idle browsing, for it affects pharmaceuticals, finished machinery, edible materials, textiles, rare oils, fuels, woods, fats, ores, earths, metals and manufactured articles.

National economic isolation, or autarchy, in this modern era of rapid communication, travel and shipments is almost impossible. So is the economic isolation of any business organization. Dependence upon other lands for export sales and surpluses as well as for their raw materials and finished products is universal except in those benighted lands which still imagine that preparation for war gives them a right to act like turtles withdrawing into their shells. "Buy American" sounds righteously nationalistic and patriotic in the extreme. It causes a feeling of warmth and pride to steal over one, but it is next to impossible where markets and sources are to be considered.

Utter selfishness in trade cannot be continued. Trade agreements are the result, and their benefits will cut costs for the purchaser as well as the salesman. It's the Golden Rule in foreign trade, or perish.

* Statistics are quoted from the U.S. Department of State trade agreements and other governmental publications.



POR HALF a century some people, unacquainted with the facts and figures, have prophesied the passing of the industrial distributor; some even have advocated it. However, merely to consider what the end of the distributor would mean to your individual business is to see how absurd is the idea.

The value of the distributor to industry is too well recognized to require argument. Yet, with respect to the cost of the distributor's function there is much misunderstanding. Applying the axiom—"you can't get something for nothing", too frequently buyers jump to the conclusion that they pay extra for the conveniences of the distributor's service. If, at times, they are able to secure a slightly lower price through direct negotiation, they find it easy to convince themselves that this represents a saving.

However, as countless buyers know, such

a "saving" is more often apparent than real. It may be eaten-up quickly by the excessive costs of carrying adequate stock, and the multiplication of orders and resulting load of purchasing detail, which the buyer must

Thoughtful consideration of the facts is certain to show that nobody pays extra when the distributor takes a profit. Actually his profit is a small percentage of the savings which he effects for both seller and buyer. The seller gets merchandise into the buyer's hands with less expense. The buyer gets the benefit of what amounts to cooperative purchasing and warehousing facilities for the major part of his requirements... which means a large saving over what it would cost to carry adequate stocks in his own plant.

Buyers who fully utilize distributors' facilities benefit most and pay no more.

Direct from Mfr. from Distributor Freight, trucking etc. Store-Door Delivery Increased costs Lower Purchasing, in Purchasing, Labor, Warehousing Labor, Warehousing costs TOTAL ACTUAL TOTAL ACTUAL COST of COST of Industrial Supplies Industrial Supplies bought Direct bought from from Manufacturer local Distributor

Makers of Jenkins Valves for more than three-score years, we know that Jenkins' customers are served better and more economically through Industrial Distributors than they could be through direct negotiation. Further, we are convinced that Industry can profit by fuller utilization of local Distributors, and in this advertising present some of the sound reasons for this conviction.

THE MARKET PLACE



A quick review of the market noting major developments in supply, demand and prices of selected basic commodities

Supply

Demand

Market

COAL

BITUMINOUS production averaged slightly better than 6³/₄ million tons per week in April, substantially below the rates prevailing earlier in the year, largely due to the slackening of the heating load, but 1¹/₂ million tons heavier than a year ago. Anthracite output currently about 500,000 tons weekly.

SALES volume fairly steady, with little tendency to anticipate advance requirements. Lake orders heavy, with transportation opening unusually late, about May 4. Stocks at dock lowest in a decade.

PRICE schedule on bituminous is nominally unchanged, slack and screenings showing weakness. Mine costs are higher in the eastern field, with about 15¢ per ton additional on the present wage scale, plus 9¢ in additional taxes. Anthracite and coke summer prices show a dollar per ton reduction.

COPPER

COPPER stocks in the United States increased 8,300 tons in March to 238,600 tons, while outside stocks were reduced about 6,000 tons. April deliveries in this country are estimated at 58 to 60 thousand tons, as compared with 56,400 tons in March. Due to the mid-month buying wave, producers are well booked up in advance.

CONSUMPTION is increasing. Purchases for April, due principally to the record breaking day of 63,389 tons on April 13th, preceding the price advance, amounted to about 160 thousand tons, or 41 thousand tons ahead of the previous peak recorded in August of last year. Demand was naturally sluggish in the second half month.

THE 9¹/₂ cent price for copper became uniform during the middle of April, when the low price group advanced their quotations ¹/₄ cent to conform. Brass products, including scrap, also advanced ¹/₄ cent. There is now some talk of 10 cent copper, the chief strength lying in the fact that large unfilled orders make the producers independent of the necessity of immediate sales.

COTTON

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TOTAL stocks of American cotton are down to about 8½ million bales, with further reduction in sight before the end of the crop year if present heavy rates of consumption are maintained. The new crop is off to a late start in the southern section of the cotton belt, with preparations about two weeks behind normal. There were excessive early season rains in the southeast, while drouth conditions prevailed in Oklahoma and northern Texas. The government pool reduced its holdings by about 2 thousand bales in April.



MARCH consumption of 548,913 bales was ahead of last year though below preliminary estimates. Mill activity continues high. Sales of gray goods in the second half of the month were more than double the production, with substantial contracts running several months ahead. It is reported, however, that converters have been selling some finished goods short. Mills are generally well supplied with staple.

COTTON prices moved irregularly during the month, but generally higher to new levels of 11.81 for the movement. Old crop futures generally ruled higher than the new, which failed to show substantial strength above 10.50. The government pool is still in control of the near market, claiming ability to control fluctuations within ten points at any time, but declining to announce any fixed policy on futures. Gray goods were advanced slightly, but fall prices on finished goods were quoted below spring levels.

IRON and **STEEL**

STEEL operations which attained a six-year peak at 67.9% at midmonth, continued to advance, standing at 71.2% in the closing week of April. Tin plate production was at 90%. Pig iron lagged considerably behind this pace, presumably reflecting a tendency away from gray iron castings in a number of important fields.

MOTOR output continued at a high rate, sustaining the demand for steel, while other fields were also active—notably structural items and rail orders, which promise to reach a total of a million tons for the year. Heavy items generally were in better demand than the light items.

SECOND quarter prices are holding satisfactorily. The quantity discount schedule has been under test by buyers wishing to group many sizes and items and to extend their cumulative tonnage beyond the three-month delivery period. Scrap markets lost their buoyancy early in the month and were definitely weak in the second half.

LUMBER

LUMBER output fell off slightly in early April, recovered during the second half. There are threats of a strike condition on the west coast, but operations are expanding in the south as timber land is drying out sufficiently.

DEMAND is broadening, with automotive and furniture industries actively in the hardwood market. Shipments (now at 70% of 1929) and new business running ahead of production, particularly in hardwoods.

PRICES are firm, advances recorded in the first part of the month being well sustained. Southern pine is now quoted fractionally above the highest 1935 level, having exceeded that figure in the third week of April.

NAVAL STORES

RECEIPTS are seasonally heavier, but the chief factor is still the large stock of both turpentine and rosin held by the Commodity Credit Corporation.

EXPORTS continue in excellent volume. Domestic users show no disposition to cover future needs. The soap industry is the most active consumer. Fair jobbing demand for turpentine.

PRICE fluctuations have been wide, with a downward tendency which carried quotations to a new low for the year in the closing week of April.

PETROLEUM

THE Bureau of Mines recommendations advanced allowable daily average production of crude oil for May by 29,000 barrels, to 2,826,300, a figure which has been consistently exceeded throughout April as Oklahoma and Texas reported a heavy flow. Crude oil inventories fair. Gasoline in storage was sharply reduced, but is still high.



THE seasonal increase in demand for gasoline is now being felt, somewhat tardily, but irregularity in the retail price structure is discouraging active purchase of bulk stocks. Fuel oil is weak. Lubricants in good demand.

CRUDE prices are strong in the southwest, but heavy output and deferred seasonal demand for motor fuels make an advance unlikely. Pennsylvania lubricants are up 1/2 cent. Retail gasoline markets are strong in the west but irregular along the Atlantic seaboard, with price cuts in several metropolitan areas.

RUBBER

EXPORT quotas for the third and fourth quarters of 1936 have been increased from 60 to 65% of the basic figure, thus adding about 30,000 tons to the world supply. Even with this revision it is estimated that world stocks will be reduced about 100,000 tons for the year. Domestic output of synthetic rubber has been considerably expanded.

MARCH consumption fell short of expectations but the April rate was at record levels. Factory buying of crude was in better volume and interest was notably more apparent, particularly on price recessions. World consumption for 1936 is expected to exceed 950,000 tons.

RUBBER prices moved in a narrow range, and for the most part stayed over the 16 cent level. There was a brief decline following the announcement of increased export quotas, but this was promptly recovered. The liberalized plan, in fact, is generally interpreted as a desire to forestall the possibility of any runaway market.

TIN

THE matter of third quarter export quotas was not decided at the April meeting of the International Committee, and will presumably come up on May 26th. Total stocks declined about 200 tons in April, now standing slightly under 18¹/₂ thousand tons. American deliveries during the month were 6,235 tons.

CONSUMPTION is at the highest rate this year, with automobile production well sustained, tin plate operations up to 90%, and large crops in prospect. Consumers stocks are fairly adequate, however, and actual current demand is slow.

THE so-called "floor" price of 47³/₈ cents prevailing at the first of April failed to hold, and quotations sagged to 46¹/₂ during the month, standing fractionally above that level on May 1st. The controlling factor is the almost complete lack of demand, which has not been stimulated by the lowered quotations.

ZINC

PRODUCTION is being curtailed, possibly by 20%, from the high levels prevailing in early April.

SHIPMENTS have been running well ahead of new business. Demand has apparently passed the peak,

PRICE of 4.90 is still holding, but without any particular strength, pending the next buying movement.



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ESLEECK MANUFACTURING COMPANY TURNERS FALLS, MASSACHUSETTS





Twenty-first Annual Convention

National Association of Purchasing Agents New Orleans, May 25-28, 1936

SUNDAY, MAY 24

6:30 P.M. Early Birds' Dinner.

MONDAY, MAY 25

7:30 A.M. Breakfast meetings, Executive Committee and Convention Committee.

9:00 A.M. Inform-a-Show opens.

GENERAL SESSION

Presiding: Fred J. Lucas of Purdy Mansell, Ltd., Toronto, President of the N.A.P.A.

Invocation: Rev. John W. Hynes, S.J., President of Loyola University.

Address of Welcome: Hon. T. Semmes Walmsley, Mayor of New Orleans.

Greetings: Rene H. Garrot of United Fruit Company, New Orleans, President of the New Orleans Association.

Response: Fred J. Lucas.

Annual Report: George A. Renard, New York City, Secretary-Treasurer of the N.A.P.A.

General Topic of this Session: Market Conditions and Purchasing Policies.

Address: "Market Conditions," by H. N. McGill, President of McGill Commodity Service, Inc., Auburndale, Mass.

Discussion: led by Charles L. Sheldon of Hood Rubber Co., Watertown, Mass.

Address: "Purchasing Policies," by Frederick J. Heaslip of Fairbanks, Morse & Company, Chicago.

Discussion: led by I. E. Walton of Heppenstall Company, Pittsburgh.

LUNCHEON MEETINGS, 12:30

Governmental Purchasers Group, with Educational and Institutional Buyers Group.

Report on Cleaning Materials.

Editors' Group.

Financial Group.

Use Specifications for Record and Printing Papers. Textile Committee.

GENERAL SESSION, 2:00

Presiding: Erwin H. Doht of Mallinckrodt Chemical Works, St. Louis.

General Topic of this Session: The Selection of Sources of Supply.

Presentation of the Prize Winning Paper.

Summary of All Contest Papers: By Stuart F. Heinritz, Editor of Purchasing, New York City, and Chairman of the Committee of Award.

Discussion: led by A. P. Hickcox of Scovill Manufacturing Company, Waterbury, Conn.; James M. Alexander of Tennessee Furniture Corporation, Chattanooga; John A. Rowe of Humble Oil & Refining Company, Houston; Harry L. Erlicher of General Electric Company, Schenectady, N. Y.; Ernest H. Hawkins of E. I. du Pont de Nemours & Company, Wilmington.

ANNUAL MEETING, 4:45

National Directors of member associations.

DINNER MEETINGS, 6:30

Hendricks Club. Oil Company Buyers Group.

TUESDAY, MAY 26

7:30 A.M. Breakfast Meetings. 9:00 A.M. Inform-a-Show.

GENERAL SESSION, 9:30

Presiding: Cliff Thorburn of Pacific Electric Company, Los Angeles.

General Topic of this Session: Contacts Between Buyer and Seller.

Address: "Relations with Sales Organization," by Donald G. Clark of Brown & Sharpe Manufacturing Company, Providence.

Discussion: led by Frank L. Kulow of Willard Storage Battery Company, Cleveland.

Address: "Relations with Purchasing Organizations," by Harry T. Bussman, Vice President and Sales Manager of Bussman Manufacturing Company, St. Louis

Discussion: led by M. C. Rider of Willson Products, Inc., Reading, Penna.

Address: "The Responsibility of Management for Price Policies," by Dr. Paul H. Douglas, Professor of Economics, University of Chicago.

Discussion: led by L. F. Boffey, Publisher of Purchasing, New York City.

BUSINESS SCHEDULE

10:00 A.M.-1:00 P.M. Polls open for voting on proposed amendments to N.A.P.A. constitution and by-laws. Ballots distributed by Credentials Committee at N.A.P.A. Headquarters.

12:30 P.M. Final time for filing claims for the New Orleans Attendance Cup.

LUNCHEON MEETINGS, 12:15

Business Survey Committee.

Chemical and Allied Products, Buyers Group.

Development of packages with special walls such as aluminum, rubber, stainless steel; development of interior coatings for standard vessels. By H. W. Elkinton of Philadelphia Quartz Company.

A novel container. By Morris H. Merritt of J. T. Lewis & Brothers Company, Philadelphia.

The two-piece 18/8 stainless steel drum. By Milton Draper of E. I. du Pont de Nemours & Company, Wilmington.

Aluminum I.C.C. shipping drums, and 13-gallon aluminum container competing with the glass carboy. The aero carboy.

Vinylite Lacquers.

Coal Committee.

Distributors' Buyers Group.

Education Committee, with Committee on Purchasing Department Organization and Procedure.

Educational and Institutional Buyers Group.

AFTERNOON MEETINGS, 2:00

Iron and Steel Committee. Public Utility Group.

WEDNESDAY, MAY 27

7:30 A.M. Breakfast Meetings. 9:00 A.M. Inform-a-Show.

GENERAL SESSION, 9:30

Presiding: Albion Bindley of Pittsburgh Steel Company, Pittsburgh.

General Topic of this Session: The Tools of Purchasing.

Address: "Sources of Information," by Frank D. Bryant of Standard Oil Company of California, San Francisco.

Discussion: led by R. E. Wright of The Standard Ultramarine Company, Huntington, W. Va.

Address: "Using National and Local Services and Facilities," by Julian G. Davies of N. Slater Company, Ltd., Hamilton, Canada.

Discussion: led by J. E. Connor of National Equipment Company, Springfield, Mass.

Address: "Spending Money to Save Money," by E. T. Gushee of The Detroit Edison Company.

LUNCHEON MEETINGS, 12:15

Presidents and Secretaries of member associations.

Committee on Uniform Markings on Valves and Fittings.

Paper Shipping Container Committee.

Financial Group.

Round Table Discussion: electric punch card machines, electric typewriters, transparent coin wrappers, storage equipment for old records, form standardization, inventory control.

AFTERNOON SCHEDULE

Golf Tournament.

Plant Visits.

Flintkote Co., Celotex Co., Lone Star Cement Co., American Sugar Refining Co.

2:00 p.m. Governmental Purchasers Group.
Mining Smelting & Refining Group.

4:00 P.M. Local Programs Committee.

BANQUET SESSION, 7:00

Address: "Government in Business," by Hon. Rufus E. Foster, United States Circuit Judge, New Orleans. Address: "In Memoriam," by Walter N. Kirkman of Maryland State Department of Health, Baltimore.

THURSDAY, MAY 28

7:30 A.M. Breakfast Meetings. 9:00 A.M. Inform-a-Show.

GENERAL SESSION, 9:30

Presiding: R. W. Seipel of Texas Electric Service Company, Fort Worth.

Address: "Improper Influences or Relations in Buying or Selling," by George M. Tisdale of United States Rubber Products, Inc., New York City.

Discussion: led by H. C. Green of Gulf States Steel Corporation, Birmingham.

Address: "Determination of Purchasing Expense and Value," by Howard T. Lewis, Professor of Marketing, Graduate School of Business Administration, Harvard University, Boston, Mass.

Discussion: led by John P. Sanger of U. S. Gypsum Company, Chicago, and George A. Renard.

BUSINESS SESSION, 11:45

Presiding: Fred J. Lucas.

Introduction of new President and Executive Committee.

Message by the new President. Adjournment.



Reprinted from FORTUNE, May, 1936

You can tell the champs from the chumps in any field by one sure test—their ability to "take it." When it comes to judging paperboard shipping containers and folding cartons, this may be the test that proves success or failure. For adequate protection is just as important as display value or cost under the circumstances of distribution today.

Constant laboratory control of materials, tures of Concor scores of daily tests to prove the correct balance tive for details.

You can tell the champs from the chumps in any field by one sure test—their ability to "take". . . . thanks to such measures, Concora shipping containers and folding cartons, this strength that protects plus the beauty that sells.

Conveniently located plants . . . large production facilities . . . the principle of "Packaging by Prescription" which means *pre-proved* containers . . . these are other important features of Concora's service. Ask our representative for details.

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AMONG THE ASSOCIATIONS

APRIL 2

San Francisco—Luncheon meeting of Northern California Association, at the Palace Hotel. Speaker: P. M. Patterson, "How Chemistry Has Helped Industry."

APRIL 6

Boston—Advertisers Exhibit and meeting of the New England Association, in the Louis XIV Ballroom, Hotel Somerset. Luncheon speaker: F. W. Hatch, Vice President of Batten, Barton, Durstine & Osborn, "The Buyer Applies a Yardstick to Purchasing." Afternoon speaker: Herbert N. McGill, President of McGill Commodity Service, "As I See It." Dinner speaker: Dr. Lewis H. Haney, Professor of Economics, New York University, "The Outlook for Business."

APRIL 7

Cincinnati—Meeting of the Cincinnati Association, at Gibson Hotel. Speaker: J. Herman Thuman.

APRIL 8

Kansas City—Fourth annual "Junior Inform-a-Show" and dinner meeting of the Kansas City Association, at the Hotel President.

St. Paul—Meeting of the Twin Cities Association, at the Hotel Lowry. Topic: "Air Conditioning, in Its Application to Residential, Commercial and Industrial Uses." Discussion led by J. R. Roberts, H. S. Morton, and R. C. Dutt, air conditioning engineers of the General Electric Co.

Toronto—Meeting of the **Toronto Association.** Speaker: George A. Renard of New York City, Secretary of the N.A.P.A.

APRIL 9

Seattle-Meeting of the Washington Association, at the Washington Athletic Club. Speakers: Dean C. J. Coon of the School of Business Administration, University of Washington, "The Brookings Institute Economic Report;" and John L. Harvey, Seattle district chief of the U.S. Food and Drug Administration, "The Question of the Federal Food and Drug Act." The following officers were elected for 1936-1937: President, George P. Locker of Metropolitan Building Co.; Vice Presidents, Roy C. Hull of Dupont Co., and Frank A. Carson of Blake, Moffitt & Towne; Secretary, George F. Drury of Northwest Lead Co.; Treasurer, Athol Baker of Electrical Products Corp.; National Director, H. J. Dobb of Schwabacher Bros. & Co.; Trustees, C. V. Zehrung, Owen Bayless and Karl Bates.

Chicago—Annual meeting of the Chicago Association, at the Bal Tabarin, Hotel Sherman. Speaker: L. F. Boffey, Publisher of Purchasing, "Today and Tomorrow in Buying." Officers for 1936–1937 were chosen as follows: President, John H. Mohr of John H. Mohr & Sons; Vice Presidents, R. W. Morrill of Bowman Dairy Co., and G. R. Zeiss of Wahl Co.; Secretary, F. J. Heaslip of Fairbanks, Morse & Co. New members on the Board of Governors are: L. H. Schreiber of Allen B. Wrisley Co., T. H. Tredwell of W. C. Ritchie Co., M. T. Hartigan of Joseph T. Ryerson & Son, Inc., and E. W. Fitzgerald of Wepsco Steel Products Co.

Salt Lake City—Meeting of the Utah Association, at the Alta Club. A slate of officers for 1936–1937 was presented by the nominating committee, elections to be held at the May meeting.

Springfield, Mass.—Annual meeting of the Western Massachusetts Association, at the Bridgway Hotel. Speaker: T. E. Pierce of United States Envelope Co., "Purchasing Problems." The following officers were elected for 1936–1937: President, J. W. Harrington of Greefield Tap & Die Corp.; Vice President, J. F. Drennan of United American Bosch Corp.; Secretary, F. E. Phillips of Chapman Valve Mfg. Co.; Treasurer, M. E. Kuhn of Springfield Safe Deposit & Trust Co.

Philadelphia—Meeting of the Philadelphia Association, at the Bellevue-Stratford Hotel. Speaker: Howard Branson of the Philadelphia Bureau of Municipal Research, "Municipal Affairs."

San Francisco—Annual joint meeting of Northern California Association with the Sales Managers Association of San Francisco, at Fort Mason, U. S. Army Port of Embarkation and Procurement Office for West Coast and Philippines. Inspection of army warehouses and the transports *Grant* and *Republic*. Dinner at Fort Mason mess hall. Speakers: Col. Ahrends, "The Army Transport System," and Col. Berry, "Army Procurement, Storage, and Supplies."

APRIL 13

New Orleans—Annual meeting and banquet of the New Orleans Association, at the Jung Hotel. R. J. Preis, General Chairman of the N.A.P.A. convention committee, outlined plans for the international gathering in May. The following officers were elected for 1936–1937: President, C. J. Alexander of Shell Petroleum Co.; Vice Presidents, Austin Leftwich of Tropical Printing Co., and A. Grant Clark of McWilliams Dredging Co.; Secretary, F. J. Basile of



2 + 2 = 4

TODAY, the actual cost of producing a hundred pound bale of sterilized colored wiping cloths is \$10.33. This figure is taken from the Cost Bulletin of the Sanitary Institute of America,

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- (1) "Are the wipers really sterilized?"
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Remember--two and two are always four--whether it's apples or the cost of sanitary wiping cloths.

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National Bank of Commerce; Treasurer, G. A. Lyncker of American Sheet Metal Works; National Director, R. H. Garrot of United Fruit Co.; Alternate National Director, A. T. Weber of Freeport Sulphur Co.

Reading, Penna.—Monthly meeting of the Lehigh Valley Association, at the Iris Club. Speaker: Harry A. Rowbotham of the Belmont Iron Works, Philadelphia, District Vice President.

APRIL 14

Tulsa—Meeting of the Tulsa Association, devoted to a discussion of purchasing problems: "Methods of Handling Invoices" and "Return of Material."

Fort Worth, Texas—Annual meeting of the Fort Worth Association. New officers were elected as follows: President, J. C. Davis of Texas & Pacific Coal & Oil Co.; Vice Presidents, J. G. Harris of Texas Louisiana Power Co., and Roy Binyon of Binyon-O'Keefe Co.; Secretary-Treasurer, S. J. Johnston of Acme Brick Co.

APRIL 15

Cambridge, Mass.—Plant visit of the New England Association, at the Boston Woven Hose & Rubber Co.

Canton, Ohio—Monthly meeting of the Eastern Ohio Association, at the Elks' Club. Discussion of purchasing problems and procedure, led by K. S. Goodin and M. F. Shaffer.

Milwaukee—Monthly meeting of the Milwaukee Association, at the plant of the Allen-Bradley Co. Speaker: R. W. Leach of Unemployment Benefit Advisors, Inc., "Social Security Purchasing Problems."

APRIL 16

Los Angeles—Meeting of the District Council, District No. 1, N.A.P.A., and Ninth Annual Industrial Exhibit of the Los Angeles Association, at the Biltmore Hotel, in cooperation with Sales Managers' Association, Credit Men's Association, Optimists Club, and Chamber of Commerce.

Luncheon Meeting. Speakers: James E. Shelton of Security-First National Bank, "Developing Western Markets;" Byron C. Hanna, Attorney, "The Business Man's Responsibility."

Banquet Meeting. Speaker: R. L. McCourt, President of L. A. Chamber of Commerce, "The Los Angeles Spirit."

Schenectady—Annual meeting of the Eastern New York Association, at the Van Curler Hotel. Officers for 1936–1937 were chosen as follows: *President*, J. L. Hodgkins of Hoy & Co.; *Vice President*, W. T. Jones of Adirondack Steel Foundry Corp.; *Secretary*, Richard Van Laer of Hudson Valley Paper Co.; *Treasurer*, S. C.

Main of National Commercial Bank & Trust Co.; National Director, C. P. Spuck of Sager-Spuck Supply Co.; Executive Committee, Henry Funk of Albany Hardware & Iron Co., George L. Brown of F. C. Huyck & Sons, and A. Read Cole of Albany Packing Co.

Cleveland—Monthly meeting of the Cleveland Association, at the Cleveland Hotel. Motion pictures of the oil industry, by courtesy of the Atlantic Refining Co. Speaker: Atty. John P. Geiger, "The Ohio Use Tax." The following officers have been chosen for the coming year: President. W. G. Winship of Foote-Burt Co.; Vice Presidents, F. J. Meket of Aluminum Co. of America, and Charles O'Brien of Grabler Mfg. Co.; Secretary-Treasurer, George A. Collier of Cleveland Automatic Machine Co.; National Director, James E. O'Brien of Fanner Mfg. Co.; Directors, David Evans of Leece-Neville Co., Frank Anderson of National Malleable & Steel Castings Co., and Vince Cada of Eaton Mfg. Co.

Moline, Ill.—Meeting of the Tri-City Association, at the LeClaire Hotel. Speaker: E. G. Swanson of the Herman Nelson Corp., and National Director of the association.

Salt Lake City—Luncheon meeting of the Utah Association, at the Chamber of Commerce. Speaker: Otto Herres, General Manager of the U. S. Fuel Co., "Fuels, Minerals, and World Civilization."

Birmingham—Annual meeting of the Birmingham Association. The following officers were elected for the coming year: President, J. P. Penick of First National Bank; Vice President, W. F. Shofner of Republic Steel Corp.; Secretary, H. A. Wilson of Long-Lewis Hardware Co.; Treasurer, D. H. Marbury of City of Birmingham; Director, W. W. French, Jr., of Moore-Handley Hardware Co.

San Francisco—Luncheon meeting of the Northern California Association, at the Palace Hotel. Speaker: S. Craig Alexander, "Alloy Steels in Modern Industry."

APRIL 16-17

St. Louis—Sixth Annual "Members Products Exhibit" of the St. Louis Association, at the Jefferson Hotel. Banquet session on Thursday evening, in the Gold Room. Speaker: Secretary George A. Renard of the N.A.P.A., "Some Factors that Govern Business and Government Policies."

APRIL 17-18

South Bend, Ind.—Annual convention of District No. 4, N.A.P.A., at the Oliver Hotel. Speakers: Secretary George A. Renard of the N.A.P.A., New York; E. G. Wertheimer of Federated Metals Corp.,

Detroit; E. L. Shaffer of Inland Container Corp., Indianapolis; Dean J. E. McCarthy of the College of Commerce, Notre Dame University, South Bend; L. G. Auberlin, Secretary of the Detroit P.A. Association.

APRIL 18

Dayton—Annual dinner dance of the Dayton Association, at the Miami Valley Golf Club.

Chattanooga—Meeting of District Council No. 7, N.A.P.A., at the Hotel Patten, attended by representatives from the associations at Birmingham, Chattanooga, Louisville and New Orleans.

APRIL 21

New York—Meeting of the New York Association, at the Builders Exchange Club. Speakers: Harry A. Rowbotham of Philadelphia, District Vice President, and H. V. Kaltenborn, internationally known writer and news commentator, "We Look at the World."

Pittsburgh-Meeting of the Pittsburgh Association, at the Willian Penn Hotel. Speakers: N.A.P.A. Secretary George A. Renard of New York, and District Vice President Harry Fenner of Cincinnati. Officers for 1936-1937 were chosen as follows: President, T. D. Jolly of Aluminum Co. of America; Vice President, K. F. Westermann of Columbia Steel & Shafting Co.; Secretary, C. H. Rindfuss of Pittsburgh Screw & Bolt Corp.; Treasurer, E. C. Buerkle of National Bearing Metals Co.; National Director, Albion Bindley of Pittsburgh Steel Co.; Directors for two-year term, W. E. Bittner of Diamond Alkali Co., N. W. Hayson of West Leechburg Steel Co., R. D. King of The Koppers Co., J. Harry Lammert of Oliver Iron & Steel Co., and I. E. Walton of Heppenstall Co. A. D. Feeman of Superior Steel Corp., Carnegie, who has served as secretary of the association for more than a decade, retired from that office due to the pressure of other business.

Lansing, Mich.—Meeting of the Central Michigan Association, at the Downey Hotel. Speaker: Frank Langford of Jackson, "Patents, as Relating to Purchasing Problems."

APRIL 22

Buffalo—Meeting of the **Buffalo Association**, at the Statler Hotel. Motion picture on "Safety." Speaker: N.A.P.A. President F. J. Lucas, of Toronto.

Rochester—Meeting and dinner dance of the Rochester Association, at the University Club. Speaker: Art Kelly, "The Dangers of Reading." Floor show. Officers for 1936–37: President, Homer L. Braunschweig of Rochester Envelope Co.; Vice Presidents, E. B. Robinson of Rochester Gas & Elec-



When STRIP STEEL is Made for the Job—Even the Most Difficult Jobs are Easier

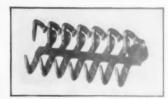
• Acme Superstrip can be called "product-ized" strip steel. It offers manufacturers definite production advantages because it is actually made to meet the specific needs of each product.

There is no run-of-mine Superstrip. The result is that countless products in dozens of fields, in

addition to automotive and electrical, are made better with Acme Superstrip.

Production difficulties, waste and rejections are avoided. Products are better looking. They fulfill their purpose more efficiently.

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Space 10, The INFORM-A-SHOW Roosevelt Hotel, New Orleans, May 25-28

THIS booth can be a gold-mine of ideas for purchasing agents, in their work of finding moneysaving methods and sales-making plans! Literally thousands of America's business leaders are now using AUTOPOINT products for good-will building. Know about these items and the tested plans when you are called on to help find good-will builders!

And know about AUTOPOINT'S contributions to lowered office costs, with the AUTOPOINT office-pencil plan. Various forms of this plan are used by many of the biggest firms in the country. Full details of it, and suggestions for adapting it to your firm's needs, are waiting you at this booth.

If You Cannot Visit the Show SEND FOR THESE BOOKS



Get them both! "37 Sales Plans" sums up clearly and simply the tested good-will and sales-building plans now used by over 5,000 leading firms. "Turning Lead Into Gold" gives you the complete story—the facts and the figures on the savings you can expect by adopting the AUTOPOINT method of office-pencil control. You'll get copies free at our booth at the Inform-A-Show, of course. But if you cannot get to the Show, write us for your copies. You will find really valuable ideas for organization use of mechanical pencils as well as for premiums and good will builders. Clip and mail the coupon now.

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tric Corp., and B. F. Ewell of Rochester Lead Works; Secretary, John T. Harbison of Hawk Eye Works, Eastman Kodak Co.; Treasurer, Roman Taylert of Richardson Corp.; Directors, W. W. Irwin, Frank Conable, E. C. Harold, and L. H. Moore.

APRIL 23

San Francisco—Luncheon meeting of the Northern California Association, at the Palace Hotel. Speaker: Frank C. Kugelberg, with colored motion pictures of his recent trip through Mexico.

Dallas—Annual meeting of the Dallas Association. New officers for 1936–1937 are: President, W. G. Wood of Continental Supply Co.; Vice Presidents, J. C. Tanner of Austin Bros. Bridge Co., and M. H. West of M. H. West Co.; Secretary, B. P. Dysart, City of Dallas; Treasurer, L. B. Mitchell of McKesson-Crowdus Drug Co.; National Director, Robert Whitten of Gifford Hill & Co.

Dearborn, Mich.—Meeting of the **Detroit Association.** Tour of Greenfield Village and the Ford Motors plant. Dinner at Dearborn Inn. Speaker: W. J. Cameron of Ford Motor Co.

APRIL 24

Toledo—Dinner meeting of the Toledo Association, at the Waldorf Hotel. Program in charge of Gordon Yost and the Toledo Scale Co. Guests included several officers and directors of other associations in the district, including National Vice President Harry Fenner of Cincinnati.

APRIL 25

Toledo—Conference and meeting of **District Council No. 6, N.A.P.A.,** at the New Secor Hotel.

APRIL 25-26

Vancouver, B. C.—Joint meeting of the associations of Washington, Oregon, and British Columbia, at the Georgia Hotel. Discussion: Sources of information and selection of sources of supply; responsibility of the purchasing agent for maintenance of sound price for both seller and buyer; Will the P.A. continue as an executive, or will he be succeeded by a junior, rubber stamping orders against contract?; Successful types of meetings for local associations; Education, qualifications and training for purchasing department personnel. Banquet speaker: Harold Brown of Union Steamship Co., "The Expanding Function of the Modern Business Man." Golf tournament at the Marine Golf & Country Club.

APRIL 27

Providence—Annual meeting of the Rhode Island Association, at the Turks Head Club. Speaker:

Granville P. Lindley, chief electrician on the Byrd expedition to the South Pole.

Allentown, Penna.—Meeting of the Lehigh Valley Association. Afternoon visit to the plant of International Motor Co. Dinner meeting at the Elks Club.

APRIL 28

Syracuse—Annual meeting of the Association of Syracuse and Central New York, at the Hotel Syracuse. The following officers were elected for 1936–1937: President, R. W. Appleton of Morse Chain Co., Utica; Vice Presidents, F. J. Quinn of Lamson Co., and C. O. Walter of Rollway Bearing Co.; Secretary, V. P. Newell of Precision Castings Co.; Treasurer, J. H. Merritt of Remington Typewriter Co.; National Director, W. H. Scott of Syracuse Supply Co.; Directors, C. H. Kissell of Goulds' Pumps, Seneca Falls, and G. L. McCaffrey of Owen-Dyneto Corp.

Hartford—Meeting of the Connecticut Association, in the Old English Room, Bond Hotel. Speaker: Bennett Chapple, Vice President of American Rolling Mill Co., Middletown, Ohio, "Business and the Changing Tides." The meeting was preceded by a trip through the plant of the Fuller Brush Company and by a commodity conference of the Insurance Group, led by Harold Peckham of Hammermill Paper Co.

Worcester, Mass.—Meeting of the Worcester County Association, at the Bancroft Hotel. Speaker: N.A.P.A. Secretary George A. Renard, "From One P.A. to Another."

APRIL 29

Tulsa—Dinner meeting of the Tulsa Association. Discussion of the make up and characteristics of drilling muds. Speaker: D. A. Sykes, district manager of Baroid Sales Co., "Yield in barrels per ton and cost per barrel; what does your drilling mud cost?"

APRIL 30

Houston—Annual spring golf tournament of the **Houston Association**, at the Brae Burn Country Club.

San Francisco—Luncheon meeting of the Northern California Association, at the Palace Hotel. Speaker: Purchasing Agent F. I. Van Dusen of Pan American Airways, "Equipping Clipper Ship Stations in the Pacific."

MAY 14

St. Paul—Annual meeting of the District Council, District No. 3, N.A.P.A.



An OUNCE of HOWARD BOND ...a TON of GOOD WILL

When a letter is typed on Howard Bond—and mailed in an envelope to match—it helps to add "weight" to the message it contains. Chiefly because Howard Bond, the world's whitest bond paper, has that certain firmness and good looking appearance which means so much in creating just the right impression. It prints well—wears well and looks well even under erasures. Its fourteen brilliant colors—six finishes provide a complete working range for the myriad of responsibilities it is called upon to perform. And its moderate price suggests complete standardization. Write for the Howard Portfolio.



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BUSINESS BOOK OF THE MONTH

Competition is more than the life of trade. It is the essential factor in national recovery and social progress

PLATFORM FOR AMERICA, by Ralph E. Flanders, President of Jones & Lamson Machine Co., Past President of the National Machine Tool Builders Assn. and the American Society of Mechanical Engineers, former member of the Industrial Advisory Board, NRA. 118 pages. Published by Whittlesey House, McGraw-Hill Book Co., New York.

THE trouble with most platforms, according to Mr. Flanders (speaking of special group interests and objectives rather than in a political sense) is that they work too well. Conceived from the viewpoint of a part instead of the whole, they generally seek and frequently obtain their particular advantages at the expense of some other part, the idea being to get for themselves a larger share. The unfortunate corollary to this process is that it may so injuriously affect the sum total of our business and social economy that the larger share actually represents a less net quantity or good.

He therefore proposes a platform to end such platforms by taking the broader outlook of the picture as a whole, going beyond the superficial antagonisms or conflicting interests typified by the traditional debate of agriculture vs. industry, capital vs. labor, business vs. government, and trying to clarify our common aim as members of American society. Once that common aim has been established, certain policy outlines can be established which should work to improve the position of every group and to open the doors of opportunity and development.

Mr. Flanders writes of, course, from the standpoint of the industrial executive, but he has succeeded in holding a fair, impersonal, and comprehensive view of the whole picture. If he is critical of some governmental, labor, and banking activities, he is equally critical of industrial greed and the excesses resulting from com-

binations in restraint of competition, whether in trade associations or under codes. His purpose, however, is not primarily critical. More important, he has a clear objective.

That objective is threefold: more goods available to more people; equality of opportunity; social progress based on increased material wealth.

Naturally such a program is fundamentally opposed to the philosophy and economy of scarcity; it is the philosophy of abundance and greater production. Unlike some others who seek the same ultimate end, Mr. Flanders believes and demonstrates that we have the machinery at hand for attaining that objective through the profit system, provided competition is not unduly

S-0-S!

(Continued from page 18)

Many buyers rented irons from employees, and some concerns employed laundry workers to do the ironing work.

With a shortage of water, toilet facilities at many plants were out of commission, and buyers were called upon to rent accommodations for employees at private houses within accessible distance.

Except for reconditioning, major stocks of material and plant equipment came through the flood without serious damage or loss. Wooden office furniture was an exception where it was subjected to long immersion. As an aftermath of the emergency, steel furniture manufacturers and dealers found a ready and receptive field of prospects in the flood areas.

Apart from destroyed records and property damage, the chief items of loss at industrial plants comprised wooden patterns, lumber and other floatable and disintegrable materials. Patterns which were carried away by the swirling waters from one large plant were recovered in some cases as far as fifty miles distant.

The flood was a stiff test of experience, adaptability and efficiency in buying. The job of buying in the emergency was one of the most important tasks on the restoration program.

Not that the record of accomplishment is a distinction enjoyed only by purchasing agents. They merely cooperated in the whole task, as did all other executives and divisions, skilled workers who gladly assumed the work and wage of common labor in cleaning plants and machinery, distributors and manufacturers who operated on 24-hour schedules to meet the demands of the stricken territory, salesmen who went out of their way to assist customers, outside manufacturers who rushed inspectors and repair crews to the scene to assist in restoring productive equipment, citizens who abandoned business for public service during the emergency. It was the complete cooperation of all which transformed what General Johnson characterized "the most complete paralysis of a large city since the San Francisco fire" into a quick and remarkable industrial recovery.

restrained and providing further that a few safeguards in the way of stable money, restriction of speculation, and employment reservoirs are maintained by the government.

On the agricultural question, he points out that its large scale practitioners have departed from those essential features and methods of operation that make it a thing apart, and are really engaged in a specialized production process, dealing, perhaps unfortunately, in products of inflexible demand and without the means of control. His answer is not curtailed per capita production, but fewer farmers (as in the case of coal, fewer miners)—a solution not as heartless as it seems for under his proposal of competition in these as in other production industries, the marginal farmers and miners would normally be drawn into other production fields by the greater opportunities existing by virtue of more flexible demand and greater potential consumption. Those remaining in the agricultural field should accept their normal business risks.

Industry is to seek its greater outlets by setting up a new "frontier" of higher living standards, made possible by increased mechanization, lowered costs, and lower prices to the consumer.

The part of government is to provide sound currency and credit policies free from speculation, encouraging enterprise and profit, coordinating the whole, acting as the arbiter, and by a flexible long-range program of public works—the "moral equivalent of war"—to provide an employment reservoir which should never be made so attractive a career as to conflict with normal employment in productive industry.

Social security should be conceived in terms of opportunity to earn a living, and a good living, rather than in subsidy and dole. The primary objective is not sharing or subsistence, but the building of a system that will at once provide the materials of a fuller life and the income through which they may be generally enjoyed. Mr. Flanders' reading of industrial history leads him to the conclusion that no bene-

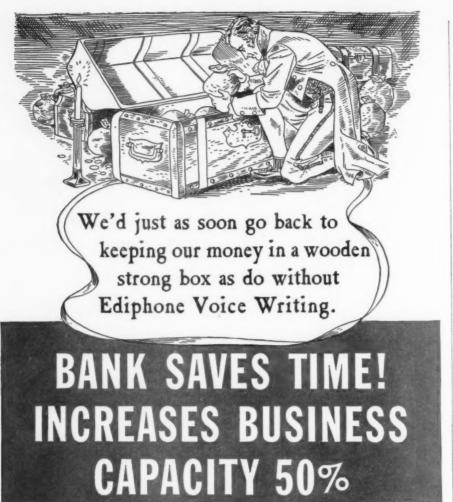
fits bestowed in kind or in artificial privilege are nearly so effective as the benefits thrust upon the worker and consumer by expanding industry.

In his opening chapter, the writer confesses to "a reluctant discontent with the evolving political history of our times." The absurd and paradoxical outcome of some recent policies, particularly in the agricultural field, have made him distrustful of theory and experimentation. The restraint of competition leads inevitably to governmental control,

and governmental regulation leads inevitably to dictatorship. Dependence on a paternalistic government destroys the moral fiber and self-reliance of our people. Our priceless national heritage is endangered. True democracy—the state as servant and voice of the people—may vanish.

The working out of this program asks Americans, in whatever sphere of endeavor, to "live dangerously" in order that the broader objective may be attained. But it is attainable, and richly worth the effort.





All banks know how to save money. Today, many save TIME with Ediphone Voice Writing.

One bank reports that before Voice Writing was installed in its Real Estate Loan Department, dictating had continued as late as midnight. Property-owners would come in during the day and interviewers would scribble notes, but secretaries weren't always available to take the information gained. Now-with Ediphone Voice Writing, dictation proceeds immediately after each interview, without waiting for secretaries. Work can't pile up - business capacity has increased 50%.

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guarantees to increase the capacity of your dictators from 20% to 50%. Ediphones stand ready . . . waiting . . . whenever needed. Correspondence can be conveniently handled . . . phone calls instantly set down . . . fleeting thoughts "captured."

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Trade Literature

Catalog No. 36 of the American Screw Co., Providence, R. I., is a 64-page looseleaf booklet, file size, listing a complete line of standard wood screws in steel, brass and bronze, drive screws, machine screws and nuts, case-hardened selftapping sheet metal screws, stove bolts and rods, tire bolts, brass cap nuts, thumb screws, wing nuts and escutcheon pins, as well as special purpose screws. In addition to the usual slotted head design, the catalog features the recently perfected Phillips recessed head, selfcentering design providing faster starting and driving, better appearance and holding power, reduced spoilage and accidents. Supplementary information is provided in the way of pertinent tabular data and recommended instructions for use. Handsomely prepared and illustrated, the looseleaf set-up gives a unique opportunity for actual demonstration and comparison of the slotted and recessed head designs.

An attractive 12-page booklet, No. T-361, covering the subject of Automatic Production Control has just been issued by Reeves Pulley Co., Columbus, Indiana. This booklet discusses thoroughly the matter of automatic speed regulation of industrial production machines and conveyors. It begins with discussion of the need for automatic control, with examples; tells how automatic regulation is accomplished through use of one of four types of controls-hydraulic, mechanical, electric and differential-in connection with variable speed transmission; and tells and shows how they may be connected and used to meet specific requirements in many different industries.

The Bristol Brass Corp., Bristol, Conn., has issued a new price list and schedule of extras on sheets and coils, rods, shapes, and wire. Supplementary material includes a 35-page section of approximate weights for the various types of product, and other tabular data.

The B. F. Goodrich Co., Akron, Ohio, has issued a convenient calculating scale. 4-1/2 x 8, that serves as an instant visible guide to tire sizes that afford maximum service expectancy for varying pay loads on 1-1/2 ton trucks. The reverse side of the card, which is also arranged as a sliding calculator scale, indicates actual tire costs under these conditions.



Since 1849, this watermark has identified record and correspondence papers which defy time and hard use. For utmost security and economy in your records; for maximum impressiveness in your stationery, always specify and insist on L. L. Brown Papers. Your printer will be glad to submit samples, or write to the L. L. BROWN PAPER COMPANY, Adams, Mass.

L.L.BROWN RECORD and CORRESPONDENCE ertified PAPERS

"A Quick Lesson in Materials Handling" is the title of a new folder distributed by Lewis-Shepard Co., Watertown, Mass., covering stackers and portable elevators, both hand and power hoist, for stacking and piling cases, crates, barrels, cartons, boxes, etc., from floor to ceiling, thereby conserving factory and warehouse space and eliminating the necessity of leasing, buying or building additional storage facilities.

A handsome portfolio of letterheads, folders, announcements, programs, etc., on Ticonderoga Vellum illustrates the versatility, excellent appearance, and printing qualities of this stock, a product of International Paper Co., 220 East 42nd St., New York City. Available in brilliant white, in substances from 16 to 32, and in soft ivory, substance 28 only, with envelopes to match.

"Knowing What to Look For" in the selection of typewriter ribbons and carbon papers is the topic of a helpful and practical leaflet prepared by The Randall Co., 5000 Spring Grove Ave., Cincinnati. It discusses briefly the basic physical properties of thread count, character of ink, and degree of inking in regard to ribbons, weight and quality of paper stock, and plasticity of carbon coating. It is sup-

plemented by a selection chart relating these properties to the character of work to be done and the results desired executive correspondence, manifolding, billing machines, general purpose, the number of copies to be made, weight and surface of copy paper.

A new folder of the Autoclench Co., 15 Whitehall St., New York City, describes a device and method for sealing corrugated shipping containers with strong, rust-proof steel wire stitches, either through or blind.

The Continental-Diamond Fibre Co., Newark, Del., has issued a new catalog of boxes, trucks, cans, barrels, baskets and trays for industrial use. The catalog is illustrated in color, with details of construction and use for each type of product.

Booklet 1725 of the Link-Belt Co., Indianapolis, deals with the company's Silverstreak silent chain drives, carried in stock at their warehouses and by authorized distributors.

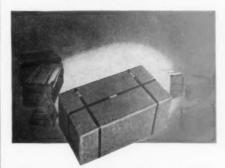
A comprehensive line of industrial, commercial, dial and recording type of thermometers is presented in the Blue Book, Part 3, issued by H-B Instrument Co., 2518 No. Broad St., Philadelphia. This attractive illustrated 20-page catalog gives all essential information regarding temperature ranges, scale sub-divisions, etc., on the various types, and suggestions as to appropriate industrial and trade applications.

Charles A. Schieren Co., 30-38 Ferry St., New York City, has issued a new series of folders covering quality, specifications and prices, and suggestions for installation and use of leather packings.

A handbook of electric weld tubing, published under the supervision of the Formed Steel Tube Institute, is being distributed by Steel & Tubes, Inc., 224 E. 131st St., Cleveland. It contains up-to-date information regarding the applications of welded steel tubing, its chemical, physical and metallurgical properties, commercial tolerance limitations, and engineering data.

Catalog V-26 of the Central Brass Mfg. Co., 2950 E. 55th St., Cleveland, is an eight-page illustrated folder of industrial faucets, valves and fittings, procurable from warehouse stocks in New York, Chicago, Los Angeles, San Francisco, Portland and Seattle.

Signode-Steel STRAPPED SHIPMENTS IMPROVE CUSTOMER SATISFACTION



• Shippers like DuPont, Chevrolet, Radio Corporation of America, and Hart, Schaffner & Marx who reinforce and protect their shipments with Signode Tensional Steel Strapping keep tight control of their product from plant to the customer . . . they know it will arrive just as they packed and shipped it.

The shipper who does not know how many of his shipments are arriving at his customers' in usable, salable condition is neglecting an important cause of customer dissatisfaction and loss of business.

The Signode steel-strapped shipment is not only the safest one . . . but it is cheaper than the non-reinforced shipment. Send for a Signode Packing Engineer to check over your shipping problems and explain how users of the Signode System make a profit in their shipping department.



Miscellaneous fibre and wooden box shipments protected against damage by Signode while in transit.

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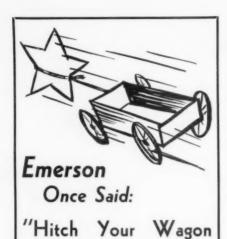
Signodes (which hold overlapping strap ends) lithographed with company name or trademark make an effective advertising medium. Also serve to identify strapped packages when other identification has become lost or obliterated.

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Into the wagon went ideas somewhat new at the time, along with a lot of ambition, energy, faith and some fundamental ideals.

Happenings along the way have dictated the dumping of some excess luggage in the form of unfruitful efforts, occasional mistakes and other things that afflict every business as it moves along toward riper experience.

Still in the wagon, however, and hitched to that star, are the fundamental ideals originally placed there. These ideals visualized the building of a business on quality, service, fair price and an established integrity.

A few Catalogs are still available. If you have not had one, or have mislaid it, just send for a copy.



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PERSONALITIES in the NEWS

CHARLES E. SMITH, Vice President in Charge of Purchases for the New Haven Railroad, and President of the New York Railroad Club, presented the railroad viewpoint on "Pick-up and Delivery Service of L. C. L. Freight" at a general conference held April 17th at the Engineering Societies Building, New York City, where shippers and truckers also discussed the topic.

Donald G. Clark of Brown & Sharpe Mfg. Co., Providence, discussed "A Purchasing Agent's View of the Gear Salesman" at the annual convention of the American Gear Manufacturers Association in Philadelphia, April 20–21.

WILHELM F. KNAUER, Director of Supplies and Purchases for the City of Philadelphia, displayed and lectured about his U. S. stamp collection at a meeting of the Atlantic City Stamp Club, April 15th.

LIONEL BONNER has resigned as head of the purchasing department of Stehli Silks Corp., New York City and Lancaster, Penna.

Gus W. Thomasson has been named purchasing agent for the Texas Centennial Committee at Dallas. Mr. Thomasson is district manager for the Works Progress Administration.

LEON BOOTH, City Purchasing Agent at Shreveport, La., is a member of the committee in charge of the Confederate Reunion to be held in that city next month. He has been asigned to the publicity group.

LAURIE S. BRADFORD of Skaneateles, N. Y., has been named deputy purchasing agent for Onondaga County, succeeding E. H. MAXON, who resigned April 1st after six years of service in the office. Donovan Roberts has been named City Purchasing Agent at St. Joseph, Mo. Mr. Roberts was formerly a buyer at the John D. Richardson Dry Goods Co., and has served two terms as City Auditor.

Obituary

Frank J. Coyle, 49, Purchasing Agent for the Union Metal Manufacturing Company, died at his home in Canton, Ohio, April 8th, following a brief illness.

SUMNER J. RICKER, 56, Purchasing Agent for the Western United Gas & Electric Company, died at Aurora, Illinois, April 13th, of a heart attack.

ERNEST BLUME, 77, Purchasing Agent for the Lidgerwood Manufacturing Company, New York City, for twenty-five years prior to his retirement from active business in 1926, died at his home in Brooklyn, N. Y., April 18th.

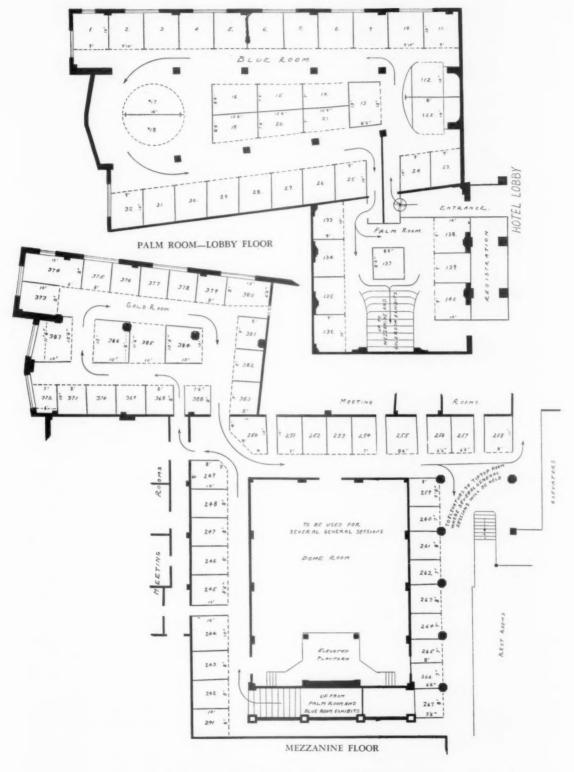
WILLIAM A. BOYLES, 55, Purchasing Agent of the Tennessee Electric Power Co. and associated companies for the past twenty-four years, died April 19th at his home on Signal Mountain, Chattanooga, after a protracted illness.

GEORGE T. NOPHSKER, 51, Purchasing Agent for the Penn Central Light & Power Company since 1918, died at the Mercy Hospital. Altoona, Penna., after an illness of several months' duration.

EARL VAN HORNE, 55, Purchasing Agent for the Champion Paper & Fibre Co., died April 21st at the Mercy Hospital, Hamilton, Ohio, after an illness of nearly a year.

Joseph Kieferle, 54, Purchasing Agent for the Pilsener Brewing Co., died at Cleveland, Ohio, April 28th.

FLOOR PLAN OF THE INFORM-A-SHOW



Roosevelt Hotel, New Orleans

May 25-28

Directory of Exhibitors on pages 44 & 45

INFORM-A-SHOW DIRECTORY

What to See and Where to Find It

Booth No.

- 368 Acme Steel Co., Chicago. The to Acme Steelstrap system of package 370 reinforcement. Hot and cold rolled
- strip steel, electro-galvanized, colorstrip, and Silcrome stainless. See page 35.
- 376 Air Reduction Sales Co., New York.
 Welding and cutting apparatus and supplies. Portable cutting machines. Airco oxygen, acetylene, nitrogen and rare gases.
- 26 American Brass Co., Waterbury,
 27 Conn. Copper and copper alloys in sheet, rod, wire, tube, extruded and drawn shapes, die pressed parts and pressure die castings. Also Everdur, Beryllium Copper, and Electro-Sheet Copper.
- 380 American Spring & Mfg. Corp., Holly, Mich. Mechanical springs and wire parts.
- 10 Autopoint Co., Chicago, Ill. Autopoint pencils for economy in organization use or for premiums and good will advertising, with Bakelite and Pyralin cases, attractively colored or printed; lead and eraser refills; Autopoint knives and files; Post-a-Lett scales; leather secretaries, bill-folds and keytainers. See page 36.
- 25 Benjamin Electric Mfg. Co., Des Plaines, Ill. Educational demonstration of better industrial lighting.
- 8 Bussman Mfg. Co., St. Louis. Electric fuses, plugs, and specialties.
- 382 Chase Brass & Copper Co., Water-383 bury, Conn. Brass, copper, bronze, and nickel silver products in all standard forms, screw machine parts and specialty items. Olympic bronze alloy.
- 259 Clipper Belt Lacer Co., Grand Rapids, Mich. Belt lacers, cutters, fasteners and connecting pins. The Clipper Speed Lacer, which can be used on belts up to 8-inch width in one operation.
- 31 Columbia Ribbon & Carbon Mfg.
 Co., Inc., Glen Cove, N. Y. A raw
 material exhibit of more than 100
 specimens of dyes, pigments, waxes,
 oils, acids, tissues, fabrics and silks.
 A finished product exhibit of general
 and special purpose carbon papers,
 roll carbons for all types of office

Booth

- machines, ribbons, inks, gelatine rolls and pans. See page 47.
- 243 Crane Co., Chicago, Ill. Valves, 244 fittings and specialties in brass, iron and steel. A graphic representation of the extensive distribution system that places stocks of these products at strategic points readily available to every manufacturing center.
- 247 Dictaphone Sales Corp., New York.
 A complete line of dictating, transcribing and shaving machines, with accessories. Nuphonic reproduction.
- 32 Joseph Dixon Crucible Co., Jersey City, N. J. A comprehensive line of pencils, including the well-known Ticonderoga, and the Eldorado master drawing pencil; Claro, a cleaner that erases without injuring sensitive surfaces; Aluminum lumber crayon, for marking on dark surfaces or under poor light conditions.
- 242 C. B. Dolge Co., Westport, Conn. Disinfectants, deodorants, insecticides, exterminators, cleaning compounds, floor finishing materials, liquid soaps; soap dispensers; a new preventive and treatment for athlete's foot.
 - 7 Eagle Pencil Co., New York. Lead pencils in black and colors, mechanical pencils, refill leads, fountain pens, erasers.
- 251 The Ediphone, Thomas A. Edison, 252 Inc., Orange, N. J. Balanced voice
- recording by the Executive Protechnic Ediphone, embodying many new and improved mechanical features; the new Ediphone for automobile use. An Ediphone Secretary will be in attendance at the booth for the service of visitors. See page 40.
- 261 Emerson Electric Mfg. Co., St. Louis. Motors, fans, control devices.
- 30 Eberhard Faber Pencil Co., Brooklyn, N. Y. Pencils, erasers, fountain pens, penholders, rubber bands, stamp pads, type cleaners and office supplies.
- 386 Freeport Sulphur Co., New York.
 Pictorial representation of plants,
 mines, and shipping facilities. Exhibition of well cores from under-

Booth No.

- ground formations. Continuous motion picture on Gulf Coast sulphur mining.
- 14 Robert Gaylord, Inc., St. Louis; to New Orleans Corrugated Box Co.,
- 21 Inc.; and six subsidiary companies.
 Comprehensive display of corrugated and solid fiber shipping cartons, folding paper cartons, and paper bags.
- 260 The Gerrard Co., Inc., Chicago, Ill.
 Wire strapping machines for package protection and reinforcement;
 wire tying for pilferage protection,
 reinforcement of heavy wood cases
 and crates, freight carload stowage
 of a variety of products; newspaper
 bundling machine; production line
 items.
- 255 Graton & Knight Co., Worcester, Mass. Power transmission by leather belting, featuring the improvements achieved by chemical and mechanical research and the profits attainable through the "bonus zone" of greater production.
- 381 Gulf Refining Co., New Orleans. Industrial and technical oils, greases and lubricants; motor oils and special dispensing pump; automotive and household conveniences; insect spray; furniture polish.
- 248 Hewitt Rubber Corp., Buffalo, N. Y. 249 Mechanical goods, with cutaway
- samples and raw materials exhibit.

 Pictorial representation of manufacturing equipment and processes.
- 250 Hygrade Sylvania Corp., Salem, Mass. Industrial, railway, automotive and outdoor lamps; new vibration service and rough service lamps. Colorful revolving display of the Lumiline lamp.
- 138 Jenkins Bros., New York. A full
- 139 line of bronze, iron and steel valves of all styles, featuring renewable disc type and regrind-renew valves, and solid and split wedge gate valves in bronze and iron body. See page 26
 - 3 Jones & Laughlin Steel Corp., to Pittsburgh. Dioramic operating
 - 6 model depicting the tapping of an open hearth steel furnace. Extensive display of fabricated products.

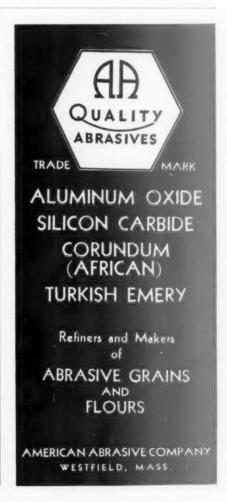
- 254 Kee Lox Mfg. Co., Rochester, N. Y. Carbon papers and typewriter ribbons; the Kee Lox carbon device for increased speed and economy in handling multiple copy work.
 - 2 Lengsfield Bros., Inc., New Orleans. Paper boxes and shipping containers.
- 253 Line Material Co., South Milwaukee, Wis. Pole line hardware and specialties, connectors, transformers, switches, fiber conduit, ornamental and overhead street lighting fixtures.
- 241 Louisiana Oil Refining Corp., Shreveport. Petroleum products.
 - 13 The Lunkenheimer Co., Cincinnati. Valves, boiler mountings, cocks, lubricators, oil and grease cups, engineering specialties. Exhibit of sectioned models showing interior design and workmanship.
- 137 MacRae's Blue Book Co., Chicago. Directory of industrial products and manufacturers, for purchasing agents and specifying officials.
- 378 Miller-Bryant-Pierce Co., Aurora, Ill. Carbon papers for every copying condition, the line embracing more than 700 grades, weights and finishes in all standard colors and sizes; inked ribbons and stencil inks.
- 375 National Carbide Sales Corp., New York. Carbide lamps for construction jobs and other outside illumination, carbide lanterns, and handy lights.
- 245 National Vulcanized Fibre Co., 246 Wilmington, Del. Vul-cot fibre and Phenolite laminated bakelite in sheets, rods, tubes, and special shapes, gaskets, gears and bushings, fibre cans, boxes and cars, headed spools, and waste baskets.
- 258 The William Powell Co., Cincinnati. Bronze, iron and steel, globe, angle, gate, and check valves. A special display of latest developments for high-pressure and high-temperature steam plants.
- 371 Republic Steel Corp., Cleveland. 372 An unusually attractive background
- 387 featuring various forms, finishes, and uses of Enduro stainless steel, "the magic metal of 10,000 uses," for architectural trim, grilles, special structural sections and many other modern applications in industrial design. Also Toncan iron sheets,

Booth No.

- pipe and enameling stock; Republic electric weld pipe; Upson bolts and nuts; Pioneer pig iron; Republic galvannealed and wire products. See 2nd cover page.
- 1 Revere Copper & Brass, Inc., New York. Copper, brass and bronze products in all standard forms, extruded and drawn shapes, tubes and pipe, die pressed and hammered forgings, rivets and burs.
- 24 Royal Typewriter Co., Inc., New York. An opportunity to see and to test this popular typewriter, which broke all previous sales records in 1935 and is setting still higher records in 1936. Among the new features incorporated in the present model are: touch control, shift freedom, finger comfort keys, automatic paper lock, and others.
- 384 Shell Petroleum Corp., St. Louis. Petroleum products, lubricants.
- 140 Signode Steel Strapping Co., Chicago. Tensional strapping equipment for reinforcing and protecting shipments in transit, both carload and I. c. I. Signode lithographed seals which make packages more attractive, eliminate pilferage, and add the protection of quick identification in case other marks are removed from the shipment. Scientific information on proper boxing and crating of various commodities. See page 41.
- 385 Solvay Sales Corp., New York. Alkalies and industrial chemical products.
- 9 Stockham Pipe Fittings Co., Birmingham. A comprehensive line of cast iron, malleable iron, and cast steel pipe fittings; header equipment for cracking stills.
- 12 United States Steel Corporation Sub22 sidiaries, Pittsburgh. Nine of the principal subsidiary companies of the U. S. Steel Corp. will be represented in this display of typical and varied steel products. In addition to actual samples, there will be lighted transparencies and photo-murals showing the uses of steel in various industrial fields.
- 28 Walworth Co., New York. Valves, 29 fittings, and pipe tools, backed by a production and service record of 94 years. Special attention to Walseal bronze fittings.
- 379 Whitlock Cordage Co., New York. Waterflex manila rope; Fibore manila for mooring and towing

Booth No.

- lines; manila rope specialties for marine, oil-field, and industrial purposes; hard fiber products.
- 373 Standard Oil Co. of New Jersey, New York. Petroleum products, fuels, lubricants.
- 377 Wilson Welder & Metals Co., North Bergen, N. J. Demonstration of 75 and 200 ampere arc welding machines, for light gauge and heavy steel
- 256 Woodward, Wight & Co., New
 257 Orleans. Distributors of mill supplies and steel products, paint, rubber tubing and mechanical goods.
- 388 Yale & Towne Mfg. Co., Philadelphia. Factory and warehouse lift trucks and skid platforms for faster materials handling.
- 133 Youngstown Sheet & Tube Co., to Youngstown, Ohio. An illuminated
- 136 display of manufacturing operations and industrial applications of iron and steel products; working model of the 79-inch hot continuous mill, showing for the first time the finishing end of this equipment.



Smaller Than Small

If it's so small there are no words to describe it, just say "gamma." For that's the new term for smallness introduced by the microchemist—the new order of chemist who occupies his time with analyzing quantities of material as infinitesimal as $^{1}/_{10,000,000}$ of an ounce. Small wonder he invented the gamma, a unit 50,000 times lighter than an ordinary drop of water and weighing a millionth of a gram, or about $^{1}/_{29,000,000}$ of an ounce!

This modern detective has developed as the result of the demands made by biology and medicine, according to Charles G. Van Brunt of the Research Laboratory of the General Electric Company. Often it is necessary in these sciences to perform an analysis where no more than a few drops of secretion or a microscopic fragment of tissue are

available. In such cases the usual methods of chemical analysis are of little avail, and the technique of microchemistry was born of this necessity. Since that time its use has spread to the various fields of industry, making possible investigations that were unthought of before.

But the accomplishments of this modern ultra small-scale chemistry are as large as the quantities considered are small. Problems of industry which were previously practically impossible are now being solved with accuracy. An unimposing streak, a tiny flake of rust, and the microchemist turns detective to ferret out some industrial crime that otherwise would have gone unsuspected.

One example was that of a broken wire in a resistance unit in a steel

plant. At first the wire was suspected of being defective, but subsequent analysis of minute particles near the break showed the presence of sulphate. The trail finally led to a nearby blast furnace which admittedly gave off sulphurous fumes, thereby clearing the wire of blame.

Another problem was presented when a small quartz window, used in a device for the detection of small quantities of mercury vapor in flue gas, was found to mist slightly. Investigation carried on under the microscope revealed tiny droplets of liquid which were readily found to be sulphuric acid. A change of fuel removed the difficulty.

The serious scaling of certain chromium-alloy heating units on test at red heat was traced, through the aid of microchemistry, to improper rinsing of the lubricant in the original manufacture. Traces of sodium, an extremely destructive agent when heated with chromiumallov materials in air, were found in the surface of the heating units. It was finally learned that the lubricant used contained a form of combined sodium which had broken down chemically to form a powerful alkali when the units were rinsed to clean them. The trouble was remedied by a change of lubricanta cause of difficulty that might not have been discovered without microchemistry.

Thus, microchemistry has developed from a tool of the medical and biological sciences into an industrial production detective. Problems, the answers to which previously could be nothing more than guesses, are now capable of exact solution. The engineer with a problem to solve need no longer worry about the small sample of material he can bring to the laboratory for analysis. For with microanalysis at its present stage of development a smudge on a contact point, a microscopic speck on a valve seat, a film of "gum" on a damaged bearing, or a minute pit mark on a cable sheath can be taken into the laboratory with a reasonable expectation that the analyst will be successful in uncovering the answer to the problem.





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Solve Your CLEANING **PROBLEMS** with SOLVENTOL

The magic of science now brings to you an entirely new principle in antiseptic semi-dry cleaning. SOLVENTOL contains Triphenylhexanisol. It employs an entirely new emulsion principle. making possible for the first time the use of synthetic organic solvents in water in a cleaning compound of this type.

Just as dry cleaning fluid dissolves and rinses dirt and stains from clothing, so SOLVENTOL dissolves and rinses dirt and oily stains from hard surfaces, leaving them chemically clean, shining and bright, without soapy film or alkaline residue.

75% of the largest industrials, institutions, hotels, apartment houses and chain organizations in our home state specify SOL-VENTOL! SOLVENTOL enjoys a reputation as the cheapest and best industrial metal cleaning compound. A KEG OR A CARLOAD ON A MONEY-BACK GUARANTEE!

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SOLVENTOL CHEMICAL PRODUCTS, INC. 12001 East Jefferson Avenue Detroit, Mich.

G. A. R.

To the Editor:

I like particularly well the very accunrately drawn pen picture of George Re-It is fair without being exaggerated and is correct without being emotional.

WALTER N. KIRKMAN Maryland State Dept. of Health Baltimore, Md., April 23, 1936.

To the Editor:

Your article on George Renard is excellent and has received a great deal of comment from our members in St. Louis. Moreover, his picture on the frontispiece is the best we have ever seen of George.

F. W. RUSSE Mallinckrodt Chemical Works St. Louis, Mo., April 22, 1936

Ugly Duckling

(Continued from page 10)

to sales departments who have never been backward and who acknowledge themselves to be not only the most important function of business but the great benefactor of mankind as well. This state of mind is probably desirable in any division of industry, providing it does not blind itself by its own brilliance.

We do affirm, however, that since business is looking for all legitimate (and perhaps some less so) means of pulling itself out of the hole it so industriously dug for itself, it has at hand a most efficient tool in its purchasing agents. Look once more at the \$36,000,000,000 figures quoted earlier and consider what they represent in your costsat the men who engineer the distribution of this sum and who from the beginning have had to fight for recognition of the fact that they have even a job. Ponder a little further over what management can do to help its purchasing departments make this investment more profitable. A lot of wasting or a great deal of saving can be done with that amount of money. The thing to do is to reduce the waste to a minimum and to apply the savings against selling prices so that sales may continue and not die from lack of nutrition.

Where do your costs go

"while the ribbon goes round and round?"



AS THE inked ribbon "goes

round and round" in your typewriter, adding machine, billing machine, addressograph or other similar machines, what happens to your costs?

How long does the ribbon keep going?

How well does it wear and write?

How consistently will ribbons of the same brand perform?

HESE are important questions to every executive whose business calls for the use of inked ribbons of all kinds.

These are questions that Columbia with its wealth of international contacts and experience can answer, greatly to your satisfaction.

Write us about your requirements or your problems. Send us a sample of the ribbon you are now using, if you prefer. Columbia's research laboratories, which have served prominent business firms the world over are at your disposal, at absolutely no obligation.



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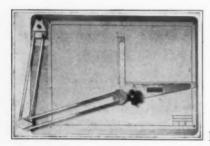


CARTON OPENER

No. 207

A NOVEL and economical device for opening corrugated and fiber shipping cartons consists of a bakelite molded case built sectionally to provide space for a razor blade. The blade is adjustable to cut to any depth desired, thus preventing possibility of damage to the contents of the container; it can be used to open cartons on either the side or top, or for cutting fiber board to special sizes in the shipping room. Can be used by either right- or left-handed persons. Pocket size, quick, convenient, unbreakable. One screw makes all adjustments.

See coupon below



DRAFTING MACHINE

No. 208

 \mathbf{A} NEW and improved drafting machine assembled as a complete unit for draftsmen, designers, engineers, layout men, and for general professional use. It is mounted on a 22 \times 30 inch

PURCHASING

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Company

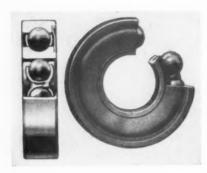
Address

City.....State.....

PAGE 48

cleated white pine board, with no loose parts. The use of T-square and triangles is eliminated by substituting a specially designed and calibrated parallel device assuring a high degree of accuracy and perfectly aligned by means of a unique chuck plate. The vernier indicating protractor gives readings to ½ degrees. The machine is sturdily built with all steel nickel-plated parts and solid phosphor bronze bearings.

See coupon below



GREASE SHIELD BEARINGS

No. 209

THESE improved ball bearings are equipped with single or double metal side shields or plate seals to aid in the retention of the lubricant and to exclude dirt and foreign matter. For applications in moderate service, these self-contained shields materially simplify problems of housing design. In more severe service, they supplement additional covers, grease baffles, etc., to provide the most effective overall protection of the bearing. In the single shield design, a steel stamping is securely fastened to the bearing outer ring on one side, protruding into a short rabbet on the end of the inner ring. The shield itself is completely within the plane of the face, and does not project. Since the normal bearing width is not increased, they are interchangeable with standard units in all respects. Produced in a range of more than 50 sizes, with bores from 4 to 110 mm. and outside diameters from 16 to 225 mm. The double shield design, for more difficult service conditions, is produced in a range with bores from 6 to 100 mm., and outside diameters from 19 to 215

See coupon at left



HOLE SAWS

No. 210

CIRCULAR holes or plugs in wood, plywood, laminated veneer, flat metal sheets, pipe or plastic materials, are readily cut with this saw attachment, which can be used in a hand drill

PURCHASING

or drill press. The blades are replaceable in a permanent holder which screws to the tool spindle, and is designed to accommodate a stub drill or center pin. Made in various sizes of spindle, holder and blade for a range of work from $^{7}/_{8}$ to $4^{1}/_{6}$ inches diameter, and up to $1^{3}/_{4}$ inches depth of cut.

See coupon page 48



NO-GLARE LIGHT HOOD

No. 211

DIFFUSION of light from electric bulbs, and filtering out of irritating red and yellow rays, with the result of better and more comfortable illumination, free from glare, is achieved by this simple hood which snaps on ordinary bulbs. Applicable to office or shop, showroom, drafting room, jewelers bench, or any other location where close work, color comparison, etc., are essential.

See coupon page 48

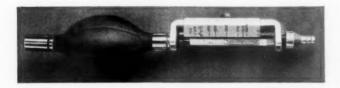


IMPROVED ELECTRIC FAN

No. 212

NEW 1936 models of electric fans are equipped with a new super-silent blade that insures quiet operation and eliminates the distraction of "air roar" without any sacrifice of efficiency in cooling and air distribution. The breeze spreader feature provides efficient distribution of cooled air over large areas without draft or blast.

See coupon page 48



No. 213

H-S DETECTOR

A DIRECT reading scale on this detector indicates percentage of hydrogen sulphide present in gases, up to concentrations of 0.04%. It operates by means of a bulb drawing the gas sample into a test tube containing a white granular chemical that turns dark gray under the action of hydrogen sulphide, the linear ex-

CUT COSTS

in the Shipping Room.



A picture
of Something
that has NEVER
BEEN DONE
Before!

IMPROVE Packaging with this Brand New CARTON SEALER

The problem of stapling the overlapped top flaps of corrugated and fibre cartons has been solved by Paslode's new CARTON SEALER. For the first time the cost saving stapling method can be employed for this type carton. The resultant better package also reduces damage-in-transit losses. Executives and shipping department managers are invited to write for a FREE DEMONSTRATION at their plant.

Executives—look into your Shipping Room with Paslode—

Paslode's trained shipping men are at your service. Their inspection of your shipping room may result in many money saving recommendations. The use of this Service involves no obligation—a request on your letter head is all that is necessary.





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Oakite Research Laboratories and Field Technical Staff have devoted their entire attention to cleaning and its associate problems for nearly thirty years. We know what can be done . . . and we know how to do it. That is why we are so confident we can help you too.

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Safety Ladders
Safety Clothing
Safety Tools
Machine Guards
Safety Bulletins

tent of this discoloration for a given number of aspirations providing the desired reading. Twelve tubes are provided with the detector, a fresh tube being required for each test. Accuracy is not affected by temperature, moisture, or the presence of other common gases.

See coupon page 48

TOTAL TIME METER



No. 214

 \mathbf{T} HIS electric time recorder registers the total number of hours during which any individually a.c. powered unit or machine is in operation. It can be applied to machine tools, welding apparatus, electric signs, refrigerators, radio transmitters, etc., mounted either at the equipment or in remote location, and will stay in step with voltages plus or minus 12% of standard ratings. Also available to measure by tenths of an hour. It has a capacity of 9,999 hours before repeating.

See coupon page 48

FLEXIBLE COUPLING



No. 215

In this new type, non-lubricated, heavy duty flexible coupling, the individual load cushions are free floating between the metal jaws and rest upon the central hub, being firmly and safely secured in place by a spiral steel spring. Cushions are free to move and adjust themselves instantly to any momentary position of the jaws. Due to this improved method of retaining the free-floating load cushions, larger hubs are possible and design likewise permits greater load carrying surfaces and increased load carrying capacity. Load cushions are always in plain sight for inspection and can be removed and replaced in a few minutes when necessary. There are no metal to metal contacts and no wear on the iron or steel jaws. In operation, one-half of the cushions are idlers (except on reversing loads), hence there is always a set of new cushions in the coupling. Due to this feature, costly and lengthy shutdowns are eliminated as load cushions can be interchanged when machines are not in productive opera-

tion, without tearing down the coupling. Three types of resilient cushioning materials are available: (1) a high grade, long-wearing brake lining material, used for heavy shock loads as on excavating machinery, steel mill equipment and other machines exposed to extreme weather conditions; (2) high quality oak tanned belting leather, for use on sustained loads and greater misalignment; (3) a rubber duck fabric, vulcanized under pressure, for use on fluctuating loads and where high resilience is required.

See coupon page 48



SAFETY TRANSFORMER

No. 216

A COMPACT portable unit expressly developed to increase the safety factor in inspection or maintenance service in plants or in service where inspections or maintenance must be done with electric illumination and in moist or damp places in buildings permeated with explosive vapor or fumes. Likewise, the use of this unit around any machinery, boilers, tanks, etc., reduces the potential shocking or explosive hazards. A primary cord, rubber covered and Underwriter's approved, may be plugged into any 110 volt 60 cycle circuit. The two secondaries to which extension cables are attached each consist of vulcanized approved cable with special non-pull-out-plugs. An ordinary pull on the extension will not break the circuit. Secondary current is rated at 32 volts. The transformer is of particular value in reducing accidents particularly from shocks from defective cable or cord used in the inspection of boilers, tanks, or machinery.

See coupon page 48



HAND TROLLEY HOIST

No. 217

ADAPTED for use where head room is limited, this hand hoist is designed with high hook lift and can be used with overhead I-beam monorail system or with a single-girder I-beam crane. No part of the hoist projects above the top of the I-beam. Standard lift 9 feet, maximum 18 feet; capacities 1/2 ton, 1 ton, and 2 tons. The hoist is equipped with anti-friction bearings on all the load-carrying parts. The frame is built of steel members in welded assembly. The trolley is integral with the hoist frame

IMPORTANT

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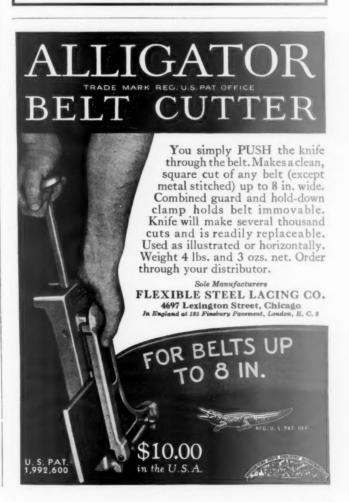
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The publishers of Thomas' Register of American Manufacturers, have issued in supplementary form the Plastic Section of Thomas' Register. This section contains complete lists of the Manufacturers and Fabricators of all types of Plastic Materials. It also contains a technical explanation for each type of Plastic.

Copies are available, without charge, to those interested in the Plastic Industry.

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and is equipped with single-flange wheels which operate on radial-thrust ball bearings. The load is raised or lowered by means of a sprocket and endless chain which serves to drive the winding drum through a self-locking worm-gear reduction unit. The worm-gear reduction performs the same function as a mechanical load brake, so that no brake is required. The hoisting drum is a flanged unit with grooves to receive the cable.

See coupon page 48

PAPER CLIP

No. 218



MODERN styling and design applied to the paper clip have produced this flat spiral clip, with spring-steel tension and extreme thinness, offering a number of practical advantages in use. There are no corners, ends, or projections to catch or pick up other papers. Used on mailing inclosures, the clip can hardly be felt through the envelope and there is no danger of cutting through. Used in filing, this flatness saves file space estimated up to 50%. The clips can be used over and over again without deforming.

See coupon page 48

PACKAGED PRICE FOLDERS



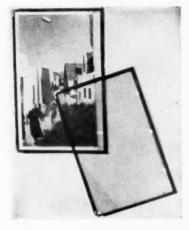
No. 219

A NEW plan of packaging price folders and envelope enclosures that has been effective in reducing the enormous waste and spoilage heretofore incident to this form of distribution is



illustrated above. The idea has been warmly endorsed by both manufacturers and mill supply houses. It serves as a convenient shipping container, keeps the material in good usable condition and encourages its use, facilitates inventory of such supplies, and is in itself an attractive bit of publicity.

See coupon page 48



TRANSPARENT SHOP ENVELOPE

No. 220

OF OUTSTANDING interest to industrial buyers, in a comprehensive line of transparent envelopes and cases, is an envelope with durable backing, sturdily bound, and featuring a transparent face of acetate celluloid that affords a clear view of the contents at all times. Designed to hold shop and work tickets as they go through the production line along with materials. The tickets are effectively protected from grease, dirt, handling and separation. They are readily referred to, remain clean and legible throughout the process. Made up in any size required.

See coupon page 48



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the safety of handling fragile products, reduce noise, and prevent damage to load and floor. The frame is of one piece steel construction, arc-welded throughout, with smooth flush hardwood top. Made in a wide range of sizes, height and capacity, and fitted with any type of racks, stakes or handles to fit the individual application.

See coupon page 48

BEAM TYPE SCALE



No. 222

THIS beam type scale embodies several new and convenient features of design, making it adaptable to the weighing of all hardware products, small parts, powders, bars, and boxes. The full-floating scoop is so designed as to serve both as a scoop and platform, and can be tilted without sliding, or taken to a stock bin for filling. The brass beam is located in front, easy to adjust and to read. A celluloid covered computing slide chart gives parcel post rates up to the 70 lb. limit. The scale weighs up to 100 lbs., by ounces.

See coupon page 48



SAFETY HAT

No. 223

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JUNE, 1936

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